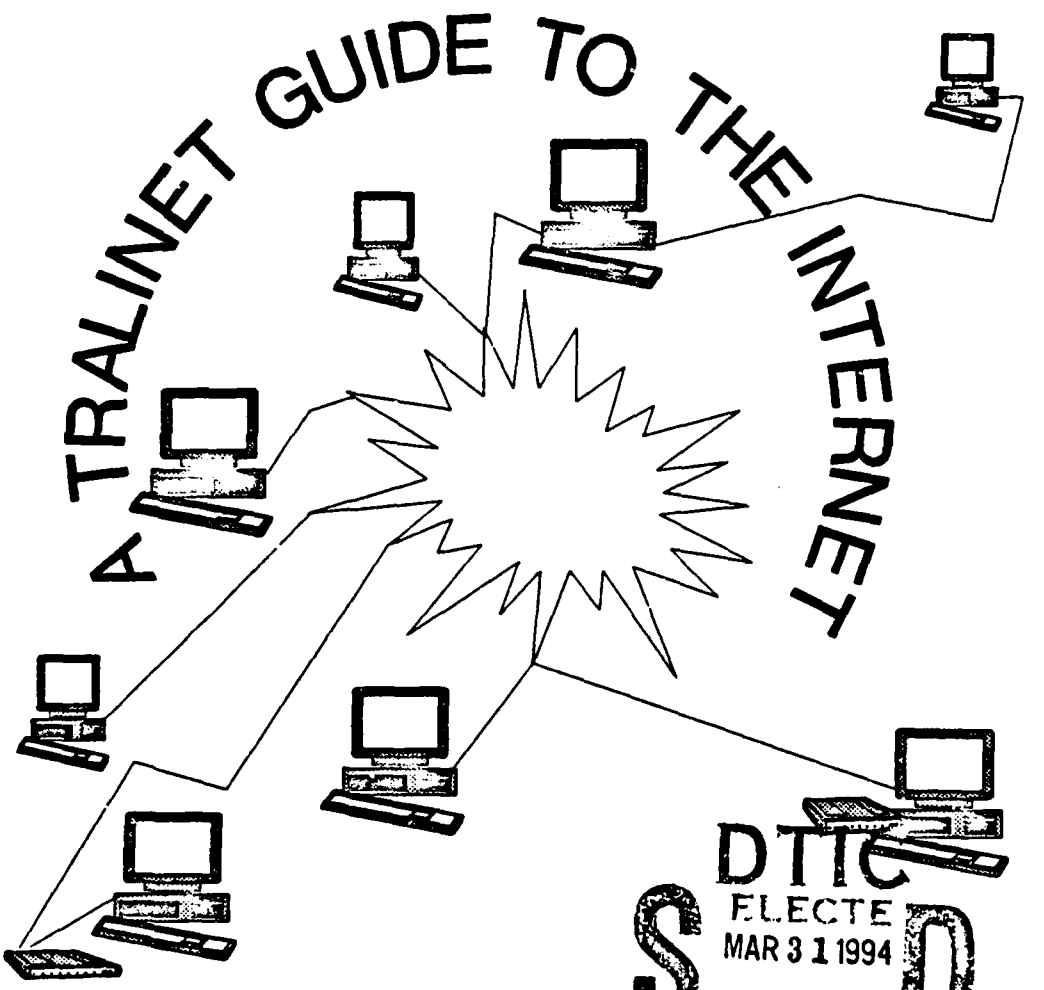
AD-A277 651



DTIC
ELECTE
MAR 3 1 1994
S E D

BY

ED BURGESS

94-09822

FORT MONROE, VA

FEBRUARY 1994

94 3 31 076

Approved for public release

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	FEBRUARY 1994	FINAL

4. TITLE AND SUBTITLE
A TRALINET GUIDE TO THE INTERNET

5. FUNDING NUMBERS

6. AUTHOR(S)
EDWIN B. BURGESS

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
HEADQUARTERS, U.S. ARMY TRAINING & DOCTRINE COMMAND
ATTN: TRALINET, ATBO-NS
FORT MONROE, VIRGINIA 23651-5117

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSORING/MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES
SUPERSEDES ADA266946, A TRALINET GUIDE TO THE INTERNET, JUNE 1993

12a. DISTRIBUTION/AVAILABILITY STATEMENT
APPROVED FOR PUBLIC RELEASE: DISTRIBUTION IS UNLIMITED

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

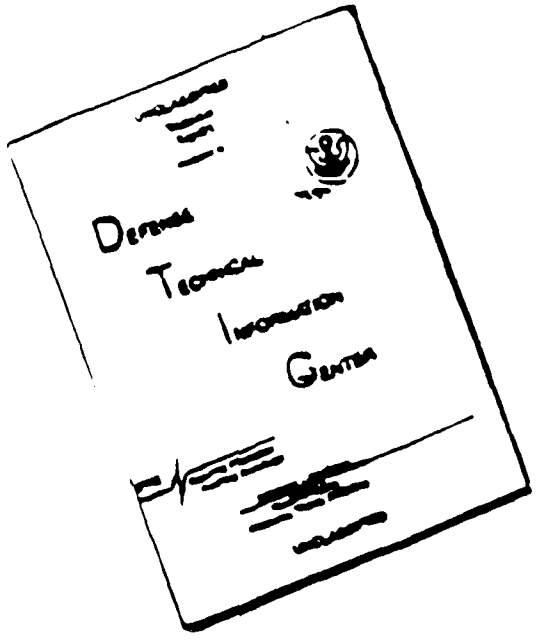
14. SUBJECT TERMS

15. NUMBER OF PAGES

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
UNCLASSIFIED	UNCLASSIFIED	N/A	N/A

DISCLAIMER NOTICE



THIS DOCUMENT IS BEST QUALITY AVAILABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.

A TRALINET GUIDE TO THE INTERNET

Second Edition

prepared by

ED BURGESS

Fort Monroe, VA

December 1993

Published by the TRADOC Library and Information Network (TRALINET) for use by TRADOC action officers.

Approved for public release; distribution unlimited.

The first edition of this guide was originally prepared for the specific needs of the TRALINET librarians, a rather limited target. However, many of the concepts and approaches described here may be more widely applicable. The authors hope so, anyway. The Internet changes quickly, and anything that looks like an error surely must be something that changed after we wrote this, so readers are advised to proceed at their own risk. Permission is granted to reproduce any part of this document, and to quote from it, so long as appropriate credit is included.

Ed Burgess is the Systems Librarian for TRALINET. He can be reached at: TRALINET Center, ATTN: ATBO-N, Bldg. 117, Fort Monroe, VA 23651-5117. commercial phone: 804-727-4491. DSN 680-4491. burgesse@monroe-emh1.army.mil

Accesion For
NTIS CRA&I
DTIC TAB
Unannounced
Justification
By
Distribution/
Availability Codes
Dist | Avail and/or Special
A-1

READ THIS FIRST

This workbook was put together for the benefit of TRALINET toilers. It addresses some specific problems that TRADOC action officers and staffers will face in accessing Internet resources. Some assumptions:

– Most TRADOC personnel will go through Profs.

– Most use an IBM 4381 or 3086 running the VM operating system.

– Some (more at the TRADOC installations than at Fort Monroe) dial into Profs using a modem and communications software.

In some cases, this workbook will talk about commands and practices which are in use at Fort Monroe. Readers should be aware that those practices are not universal. The reader is strongly advised to speak with his or her local system administrators.

Anyone wishing to actually do work on the Internet is advised to bring along an extra helping of patience. Partly because of the hosts that TRADOC uses, and partly because the reality of the software you will be interacting with is far removed from the promotional literature, Internet surfers often get stuck. The Internet is new, evolving, constantly changing, designed by computer systems people rather than information retrieval people. Things don't always go as well as one would hope.

TABLE OF CONTENTS

Introduction	4
Questions and Answers	5
1. Scope	7
2. How to get started	7
3. What is the Internet?	8
4. Tools	15
5. Security	18
6. UNIX	18
7. Etiquitte	19
8. Exercises	20
9. Gophers	30
Glossary	37
Bibliography	39
Appendix A, TRADOC Hosts	40
Appendix B, Yanoff list	41

INTRODUCTION

Everyone seems to be talking about the Internet now. It's the hot topic at conferences. it's in all the journals. But talk to the Army community and, and you will find a very small number of them are actually using the Internet in any meaningful way.

There's a reason for that, in fact many reasons. The first is that the Internet is not so easy to use. It requires access, which not all have. It is very diffuse--many resources, scattered over thousands of computers, and there are no directories. Even worse, if you actually manage to overcome the access problem and find information you want, the computer sneers at you in language you haven't heard before, and your keyboard doesn't work right.

This manual will help you overcome some of those problems. We've identified a few sample resources that may actually be of some assistance to your work. We've identified some techniques that will make it a little easier to connect up to certain computers. We've tried to relate the Internet to TRADOC, and TRADOC host computers. We've tried to give some sense of the widening horizons that the Internet can give us, and the unmanageable masses of data we can access.

TRADOC libraries exemplify the trends in this area. Twenty years ago TRADOC librarians essentially managed the collections within their walls. Maybe they did a little interlibrary loan, but it was tedious and slow to even find out about books and periodicals elsewhere. Ten years ago TRADOC libraries began using the various commercial online services, and their horizons broadened considerably, especially in books and magazine articles. Now, TRADOC librarians can access a thousand kinds of resources, all over the world, with the tools they have on their desks. Few of them actually are, yet, but the techniques are spreading. It's going to require new skills, and it's not going to be easy.

But what we (not just librarians, all of us) really need to do is get the customers the answers they want, The author is trained as a librarian, so this guide is written from the standpoint of retrieving information for customers. The customers may be General Officers, DA staff offices, college students, or civilians, and they are starting to want things that are tough. Probably you will only need to use a few of the possible sources on the Internet, but it's very likely you will use some. This is a start.

Acknowledgements: This is the second edition of the Guide. The first edition was written by Ed Burgess and Leroy Bell, a talented intern who has since left Federal service. The current edition builds on that work. Others who have contributed include Jean Thacker, Fort Monroe DOIM; Russell Rafferty, TRALINET; Jeanne Herrman, HQ TRADOC DCSIM; Leslie Williams, TRALINET; and FRAN Doyle, TRALINET.

QUESTIONS AND ANSWERS

Why should I use the Internet? I've been getting along just fine without it so far.

Darned good question, actually. The answer comes in two parts, one concrete and the other rather rather spacey. First, you are using it now whenever you send email. It just happens that there are other tools available via Internet connections which no one ever told you about before. Second, the world is getting smaller, and what's left of it seems to be more tightly connected and more volatile. We're going to need fast, decentralized ways of interacting with all the various people we communicate with. It looks like a huge number of people are going to be using the set of resources we call the Internet, and we'd better be sure we're not losing ground.

I followed your instructions and they don't seem to work. What now?

Because you are in TRADOC, you probably access the Internet through Profs. This means that you are a user on a host computer somewhere, usually at your installation. You have to get familiar with the DOIM staff. They must assist you, and they can. True, levels of support vary. Some are more knowledgeable than others, some are more interested than others. But all the DOIMs can help you, and every TRADOC office can get connected to the Internet in some way. This is a burgeoning area of interest, and the DOIMs are often learning along with their customers.

I haven't got time to play around with this. I have a job to do and I'm overworked already.

You're busy, sure. If you aren't, your job is probably at risk. This is an additional area of service that is glamorous, timely, and potentially productive. It's also the biggest step forward in access to information since we gave computers to librarians. It's free, which may interest some people. It's something employers are going to be asking about.

I dial up Profs using ProComm. It's slow and cumbersome.

That's a problem. It's better to be connected to your host via a controller or a LAN. Dialing in is a pain. We can't solve that, though. You have to. Get with your systems people and talk to them about improved access. If you have a demonstrated mission that requires better connectivity, you may get farther with your arguments. Yes, I know, that's easy for me to say, but no one ever listens to you and your ISO is an E-4 and your budget was just cut for the fourth time since February. Isn't management challenging?

Someone told me I'm in the Internet already. What did they mean?

You are. The network that the military runs is called the Defense Data Network (DDN). MILNET is the unclassified portion of the DDN. MILNET is one of the parts of the Internet. If you have a Profs userid you can send email to anyone in the world who has an email system connected to the Internet. Theoretically you can access resources on the Internet. You may need some help from your system administrator, though.

I logged into this library catalog in Germany, just like the guide I read told me, and my keyboard froze up. What'd I do?

I don't know. Sometimes we just can't connect. If their system won't interface with ours, or if our keyboards don't generate the codes they expect, odd things will happen. The books suggest that IBM mainframes, which TRADOC has, often have trouble talking with the UNIX-based machines that are so prevalent elsewhere. Reboot and try someplace else.

Someone sent me a note from a civilian company, which I got, but I can't seem to send one back to him. What's wrong?

Call your system administrator. Each host computer has a list of approved "addresses"--actually host names--with which it can communicate. These lists are quite long, and are updated frequently. For convenience, local sysads don't always keep civilian addresses in their lists, and instead just load the military ones or the ones most used. Your sysad will most likely be glad to add another address. Fort Monroe and the installations where battle labs are located recently installed some marvellous software--don't ask how it works--which resolves most addresses without your noticing. Mention that to your sysad.

I keep hearing about these discussion groups on the Internet. Are they worth while?

We can't say if you'll get much from any one of them. Discussion groups essentially allow you to post a note on a bulletin board. Mechanics differ, but in many a user sends an email note to the computer hosting the group, and the computer then resends that note to all the members. This process can generate a lot of mail, and only some of it is interesting. (We once got 23 messages arguing about whether to use "disk" or "disc.") But we also got some useful things, too. Try a few. If you don't like them, drop out.

I tried to give someone the email address people in TRADOC use, and she said it wouldn't work.

We are accustomed to seeing addresses written in this form: MON1(BURGESSE). That's because TRADOC has provided that as a kind of shorthand, good only within the TRADOC communication network, for the standard form of email address, which is like this: burgesse@monroe-emh1.army.mil. Other people's computers expect the longer form.

I already give people my DSN and commercial numbers and my Profs address and my mail address. Now you want me to have yet another email address?

Well, yes. This isn't going to go away. You're going to be getting notes and files from friends, colleagues, vendors, librarians, managers, who knows what. TRALINET librarians are already transferring acquisitions and cataloging data via Profs; resource managers have been moving spreadsheet data via Profs for some time. That kind of data exchange can go on with virtually anyone in the world, and it's growing rapidly. The military is in danger of being left behind in the technological races. That would be bad for service, bad for our careers, and bad for our profession.

Is this Internet thing actually useful, or just another overhyped toy for the technologically addicted?

Yes to both. This is an emerging area. Some people are deeply involved, others are not. You can retrieve a lot of data from a lot of places, not all of it meaningful. You can send electronic mail to a lot of people, not all of whom you wish to speak to. You are already using one of the Internet capabilities to send and receive email within TRADOC; the functions described below simply expand on that capability. Every functional area in the Army is taking advantage of some Internet resource. Librarians are already getting questions daily about Internet-accessible resources: providing information for their customers is about to get far more complex for libraries than it ever has been before. Other service providers such as action officers, XOs, managers, commanders, etc. are in the same boat. Internet enthusiasts tend to be evangelistic to the point of exhaustion, but that doesn't mean that we can dismiss their exhortations. We believe that if you want to retain your credibility, you need to get familiar with the evolving worldwide net.

1. SCOPE

This guide will give you some basic skills and direct you to a very small portion of the electronic files which are available over the Internet. It uses language and examples which TRADOC users can follow, and lists samples of references and documents that will be useful to them and their customers. We hope this guide can be used as a reference tool to which TRADOC users can refer when searching for specific resources.

2. HOW TO GET STARTED

2.1. Get acquainted with your system administrator. Engaging in telecommunication with remote computers is not always a straight- forward business. You cannot do it without assistance from the people who run your computer. Talk to them. Show them this guidebook. Get them interested. They are supporting these functions now; there is nothing in this workbook that can't be done in every TRADOC office.

2.2. Working on the Internet requires time. No one has any, of course, but it is necessary to experiment, to think, to fail, to succeed.

2.3. Read. The bibliography contains books cited frequently, books we have used successfully, and titles that looked promising.

2.4. TRADOC users accessing the Internet through their Post mainframe may have trouble connecting to a particular address because the address may not be in the mainframe's host table (a list of legal addresses that the installation mainframe maintains). Contact your system administrator to get the address registered if you have this problem. For many TRADOC installations (currently the ones with Battle Labs) this problem has recently been ameliorated, because their DOIMS have loaded some software which checks out addresses and figures out how to get hold of other mainframes without human intervention. It's not perfect, but it seems to have taken care of about 95% of the addressing problems.

2.5. It may work better if you use the IP address (e.g., 192.126.8.4). Before trying out Telnet and FTP you will need the Telnet executable file resident on your A disk (see glossary). Contact your system administrator to get it.

2.6. You may need to get a Terminal Access Card (TAC), an authorization which allows you to use a TAC node. At Fort Monroe, we use the TAC node at Langley AFB, but there are others around the country. TAC can give you access without having to go through Profs. For some applications, this may be necessary. Or, even better, there may be a UNIX host on post that you can use. Depends on your needs; ask around. Some Internet buffs may be best served by going to a commercial access supplier and subscribing.

2.7. Remember this: much of the difficulty of using the Internet is that everybody has a specialized language, and nobody explains what the new words mean. For instance, computer specialists will use several different names for the same concept: mainframe, TISI, server, host. We never do this, of course.

2.8 As a convention we have enclosed keyboard entries inside a pair of arrows, like this: <telnet>. This means you should not type the arrows or the period, just the six letters. When we're showing what the computer screen will say, it's in this typeface.

3. WHAT IS THE INTERNET?

3.1. The Internet is not an easy place. The main reason it doesn't seem well organized for us is that it's not well organized at all, for anyone.

3.2. The Internet is a very loose conglomeration of computers and computer networks all over the world which can exchange data in standardized ways. In more technical terms, it's a set of host computers and networks which agree to use the Transmission Control Protocol/Internet Protocol (TCP/IP).The Department of Defense runs a very large network called MILNET, which is unclassified and is a part of the Internet.

If you're interested (most readers shouldn't be, especially if they have any worries about their own mental stability) a detailed if poorly reproduced report on the MILNET does exist. The DDN New User Guide was actually prepared by the DDN Network Information Center and published by the Defense Technical Information Center (DTIC) in 1993. (DTIC is a clearinghouse for DOD-generated reports and studies.) It is most conveniently available by asking your servicing library for ADA262860.

Twelve years ago, there were about 200 computers hooked up to the network that eventually became the Internet. Now there are approximately one million. The number of users is widely considered to be uncountable, but certainly in the tens of millions.

3.3. There are three basic services available on the Internet:
- Electronic Mail (Email)
- Remote login (TELNET)
- File Transfer (FTP).

There are other services that are variants of these three:
- Electronic journals
- Computer conferences
- USENET newsgroups

3.4. EMAIL allows you to communicate with other people on other networks around the world, providing their address is registered with your post mainframe. With email you have the capacity to send and receive files and messages from other users of computer systems. This is very like Profs, although Profs contains some other functions as well. Profs can send email to any Internet address. Since TRADOC personnel have been using email for some time, and since Profs manuals and assistance are widely available, this workbook will not concentrate on email. One thing, though--you do need to understand how to use CMSNAMES nicknames.

3.5. TELNET is a command that allows you to login to another computer at a distant location. (Note that this is quite different from Telenet, which is the old name for a communications network now known as Sprintnet.) This command allows you to connect with a foreign computer and interact with it like any local user would. You might use telnet to search a distant library's catalog or log into a specialized database.

3.6 FTP (File Transfer Protocol) is a command that allows you to transfer files from a distant computer to your own host computer. Sometimes called "anonymous FTP." Many sites maintain quite extensive collections of files that one may copy. Some sites allow remote users to put files onto their host. This has become an important adjunct to academic and scientific publishing in the universities because new research material can be distributed quickly. The host must set up a special area that remote users can reach into, you can't just dial up Fort Benning and play with their system at will.

3.7. Using TELNET.

3.7.1 You will encounter problems when logging into other computer systems. Screen displays may be garbled or incomprehensibly displayed. The information you retrieve may not be in a usable format. These problems are due to the incompatibility of your local system and the foreign host. The IBM systems that TRADOC installations use often have problems displaying the information that is sent to them, particularly when telneting to a UNIX host or certain online commercial databases.

3.7.2 Having said that, there a number of nifty resources out there that you can access. A recent study identified 337 library catalogs that surfers on the net can enter. Several sites provide free access to a variety of computerized resources--periodical indexes, community information, how-to information, even some entertainment. See the Exercises chapter for some.

3.7.3 At Fort Monroe the command for telnet is TN, but once again, ask your local sysad. You must have a special exec file attached to your Profs. Local customs differ, so check with your system folks.

3.7.4 Typically, what you'll do is:
<TN pac.carl.org><enter>

After which, the Fort Monroe host says.

Valid user and password required on foreign DDN host

Then another screen will say:

VM TCPIP Telnet V2R2
Connecting to pac.carl.org 192.54.81.128, Port Telnet (23)

Using Line Mode...

Notes on using Telnet when in Line Mode:
- To hide Password, Hit PF3 or PF15
- To enter Telnet Command, Hit PF4-12, or PF16-24

Then, after a suitable wait (bring coffee), you will connect to the distant host. The host in this example makes you go through a lot of steps which establish that you have a VT100 terminal (you do), that you are not a member of the Colorado Alliance of Research Libraries (you aren't) that you do not have a profile established (you don't). Then you will be faced with cascading menus of things to access--over fifty library catalogs, electronic encyclopedias, commercial databases, other great things. Don't get overexcited. Several of them aren't open to strangers, a couple have charges that they warn you of. But most are open and free.

3.7.5 If you get stuck or confused, and neither is a disgrace, being all too easy, press <F4> on your keyboard. This will allow you to enter a local (meaning Fort Monroe) command. <QUIT> is the most useful.

3.7.6 Whether you break out, or whether you use the remote site's menus/commands, when you quit the Fort Monroe host will say:

Press <Enter> to return to CMS.

Do so, and find yourself back at home.

3.7.7 Lots of telnet sites don't care who you are; lots more do care but freely let you enter into selected parts of their systems. Other sites expect you to be a legitimate registered user or to beat it, and swiftly.

(Guess which category most MILNET sites fall into.) Remember that all telnet-accessible hosts are accessible because their organization needs the host, and you are basically a charity case. Be humble.

3.8 Using FTP

3.8.1 FTP is sometimes called "anonymous FTP" because one of the conventions is that you log in to the remote host as an "anonymous" user. Except of course you aren't really anonymous--the other computer always knows who you are and where you live. Internet was designed by computer engineers, not linguists. Live with it.

3.8.2 At Fort Monroe the command for this is <FT>; but check with your local system folks.

1. FT [domain or IP address]
2. Login as <ANONYMOUS> [This means type the word "anonymous"]
3. Password <GUEST or your email address> [try both, but usually requires your DDN address, as, userid@monroe-emh1.army.mil]

3.8.3. There are four basic commands you need to keep in mind when you are in a FTP session (there are others, but these are basic).

DIR - this tells the computer to list the files in the current directory. Works very like the DOS command.

CD - tells the computer to change from the current directory to another directory. Works very like the DOS command.
CD /dirname moves down the tree
CD .. moves you back one level

GET <filename>- this command tells the computer to download or transfer the current files requested into your local system.

QUIT - this command tells the system that you want to end the session. It will probably throw you back to your own host.

3.8.4. It's a good practice to transfer README or INDEX files first so you can get information about the files or the directory you are in. Sometimes there are instructions or descriptions about various files, instructions about unzipping compressed files, and information about where other files are located.

3.8.5. Four things to remember:

3.8.5.1. File names are case sensitive so type them in exactly as they are displayed in the directory. Email addresses, on the other hand, are not as a rule case sensitive. Software designers do this sort of thing so that they will be worshipped as demigods.

3.8.5.2 Most of the systems that you will be connecting to will be different from your IBM mainframe, and will have the file names set up in different ways. IBM has filenames that look like this:

smith jones [in some circumstances a dot separates the two parts]

UNIX might have a filename like this:

lincoln-inaugural.second.text.wash

You cannot transfer that file to our mainframes using that name. The solution is to change the filename to a format that your local IBM system understands, like this:

GET lincoln-inaugural.second.text.wash LINCOLNS.INAUGURL [your local system will recognize this format--note that it's form is 8char.8char--that is, a filename of up to eight characters and a filetype of up to eight characters, separated by a dot.]

Just for comparison, remember that DOS uses filenames that look like this:

filename.ext

This will become important (and can be pretty confusing) when you start to move files from a remote host to your desktop PC. Keep a cool head. Filenames and directory displays are fearfully confusing, one of the worst examples of ergonomic design I know.

3.8.5.3 Remember that FTP transfers files from a remote computer to your mainframe computer, and stores them in that little corner of the mainframe you call your own. In Profs, that is called your A disk. You will have to do a separate step to bring the file down from the mainframe to your PC. Since there are a number of ways of doing that at the various TRADOC installations, this workbook cannot address that part of the puzzle, but your local systems people can. Speak to them.

3.8.5.4 Eventually, you're going to get stuck. When you do, try pressing <F4> (may be <PF4> on some machines). This should allow you to enter a host command, like <QUIT>, to break out of the remote computer and return home. If that doesn't work, try rebooting. This works when telnetting, too.

3.8.6 If you are going to get very seriously into FTP, this manual will not be sufficient. Get one of the books in the bibliography and study some. Simple FTP is not very complex but you can get wrapped around the axle.

3.9 . COMPUTER CONFERENCES

3.9.1. The increasing availability of email services and interconnections between computer systems has spawned a new kind of communication. This phenomenon is often described as discussion groups or computer conferences.

3.9.2. Discussion groups come in a lot of shades, but most work this way. A monitor sets up an email site which is dedicated to a certain subject. Interested people join, and send messages to the monitor which they believe others would be interested in reading--opinions, technical questions, gossip, answers to others' questions. Usually the monitor edits and screens the mail, but his main function is to resend all those messages to everyone. Thus if I send a note asking why the sky is blue, my query will be read by all the registrants, and a fair percentage of them will probably send in their opinions on my question. All of those answers will be forwarded to every participant, and so on. Since each discussion group is usually quite focussed on a particular subject, the registrants all tend to understand each other and to stick to the general area of interest.

3.9.3. You can get a list of lists. It's huge. Leslie Williams, the reference librarian at Fort Monroe, printed it out by leaving her printer running all night. It made a stack about four inches tall, and not much white space. FTP to ftp.anon.sri.com, in the netinfo/interest-groups directory. Or, you can email to mail-server@nisc.sri.com; in the subject line put: <send netinfo/interest-groups>.

3.9.4 This is a good place to mention that any printed list of Internet resources (like mine) is out of date well before it gets to the Printing Plant. Internet hosts are all run by independent bodies. They have no special responsibilities to one another other than to use compatible software. They come on line and drop out of the net unpredictably, and files held in them change with the rising of the moon. There are a

number of online resource guides, and their number increases monthly, which are updated on a regular schedule. Appendix B is a sample of such a guide which is updated biweekly by Scott Yarnoff.

3.9.5 TRADOC maintains at least one discussion group, the Historian Bulletin Board. The Center for Military History is the overall proponent, but the Office of the Command Historian at HQ TRADOC is acting as overall system administrator. The discussion group is in the form of a bulletin board on Profs at Fort Leavenworth. This one does not send email to members; members post notes in the bulletin board and others must log into it to read them. If you wish to participate in the bulletin board, send an official request containing your name, position title, and current security clearance level to HQ TRADOC, ATTN: ATMH (Dr. Stensvaag), Fort Monroe, VA 23651-5026. HQ TRADOC will pass on your validated request to the Fort Leavenworth DOIM, who will issue a userid.

3.9.6. I'm most familiar with the library-oriented lists, but some of my friends follow comics, fly fishing, music, etc. There's something for everybody. Naturally I'm not advocating using government resources or time to support your hobby.

Here's how to subscribe to PACS-L, a library-oriented computer conference, via PROFS. You'll need to know how to use CMSNAMES, remember.

1. At the PROFS main menu, go to PF3 (Send a Note).
2. In SEND TO: field, enter: CMSNAMES(XXXXXXX)
3. Leave the SUBJECT: field blank.
4. Tab down to the message area, and type:
   Subscribe <List Name> <first name> <last name>
   Example: Subscribe PACS-L Jane Smith
5. Tab down then type: .nl
6. PF7 to send
7. [Then a screen comes up for ADDRESS ENTRY]
   At USERID type: <whatever is LEFT of the @>
   Example: PACS-L
   AT SYSTEM (or Node) type: <whatever is RIGHT of the @>
   Example: UHUPVM1.UH.EDU
   remember you don't type the @ sign
8. Press <ENTER> to send

Specific conferences may have different procedures, but the majority work this way. If you hear of a conference, follow whatever instructions are provided.

3.9.7. The following list contains a few of the dozens of discussion groups for various brands of librarians. You can subscribe to any of them by simply sending an e-mail message. Details may differ, so you may need to experiment. Pick one or more and try them for a while. It may interest, bore, or startle, but one thing it is sure to do: increase your email traffic. I was in PACS-L for a while and averaged about 10-20 Profs notes a day; PACS-L probably generates more traffic than most.

Here are some representative library conferences:

AFAS-L@KENTVM.KENT.EDU	African American Studies and Librarianship
BUSLIB-L@IDBSU.IDBSU.EDU	Business Librarians
CDROMLAN@IDBSU.IDBSU.EDU	CD-ROM LANs
LIBADMIN@UMAB.UMD.EDU	Library Administration and Management
LIBREF-L@KENTVM.KENT.EDU	Library Reference Issues
MEDLIB-L@UBVM.CC.BUFFALO.EDU	Medical and Health Sciences
PACS-L@UHUPVM1.UH.EDU	Public Access Computer Services Forum

OK, not everyone's a librarian. I am. Find your own list.

3.9.7. Note: Discussion groups are often advertised with the BITNET address. Since TRALINET librarians are not in BITNET (it's a commercial network, another part of the Internet), you must use the Internet address and not the BITNET Address.

EXAMPLE: ADVANC-L@IDBSU is the BITNET Address
LISTSERV@IDBSU.IDBSU.EDU is the Internet Address.

BITNET is accessible thru the Internet; in fact it's part of the immense collection of computers and phone lines which comprises the Internet. We gather that there is a different protocol used for BITNET; many international hosts (in Europe, for example) use this protocol.

Since it is different, there are actually hosts (mostly .edu hosts) which act as a "translator" of sorts. These hosts take Internet mail and format it into BITNET mail and vice versa. Our sysad at Fort Monroe says that WAIS at the DDN NIC is a way to lookup these host names and various userids. I haven't had occasion to use this facility much since we don't send much mail to foreign country hosts (mostly to military hosts in foreign countries).

One of the more common "translator" hosts is CUNYVM.CUNY.EDU. To get a BITNET address of ADVANC-L@IDBSU to flow, you can address the note as follows:
ADVANC-L%IDBSU@CUNYVM.CUNY.EDU

3.10. Electronic Periodicals. The electronic periodical is a new form of publishing that has recently become practical. Because a fairly large number of people can access computers, and retrieve files from anywhere in the world, it is now possible to publish a periodical without putting it on paper. Issues, or even individual articles, can be stored as files on a host, and interested readers can FTP them.

This is a wonderfully economic idea: the publisher no longer needs to maintain a printing press, purchase ink or paper, spend his capital on postage. The readers select themselves and gladly accept the burden of getting the material. They even print it themselves. The only cost is storage room on an Internet-accessible computer.

The technique is applicable to certain low-volume magazines, especially academic ones. Articles may be refereed or not. A recent survey by OCLC identified 26 electronic journals, 72 electronic newsletters, and 16 electronic digests. As the field matures, electronically published periodicals are getting progressively more professional and more numerous. You will see them advertised in discussion groups and mentioned in professional literature. Unless you find one whose subject matter interests you or your customers, they are little more than curiosities today, but look for this publishing niche to expand rapidly over the next decade. Reflect on the issues involved in bibliographic control: the computer guys are trying to horn in on a part of librarianship no one else ever wanted, that is, storage of back issues of magazines.

For now, these things work, if clumsily. If you sign up for any of the discussion groups, you will soon receive invitations to receive electronic periodicals also. Find some, try them out.

3.11. USENET Newsgroups. USENET is not available at Fort Monroe, nor, as far as I know, anywhere in TRADOC. Think of it as a huge UPI wire service into which anyone can put articles and from which anyone can search and retrieve. "Anyone" meaning a person with access to a USENET server. Not having had personal experience with USENET, we can't say much about it. If you're interested, see lengthy descriptions in The Internet for Dummies, Navigating the Internet, etc. To see USENET you'll have to subscribe to a commercial Internet access service.

3.12. Each host computer on the Internet has two names, one mnemonic and one numerical. Both names (think of them as both names and addresses) are unique throughout the Internet. Fort Monroe is known by it's mnemonic name (monroe-emh1.army.mil) and it's Internet Protocol, or IP, name

(192.111.52.10). For telnet and ftp you may use the two names interchangeably, but email requires the mnemonic name. You really don't want to know why this situation exists; just accept that it does.

3.12.1.The host's local table is a list of other hosts which the host knows how to get in contact with. It's normally a file which is retrieved from the DDN NIC periodically by the host administrator. The list is limited to those hosts who are registered at the NIC. Primarily government hosts are registered. We have been told that approximately 1% of the hosts accessible thru the Internet are actually listed and advertised at the DDN NIC ... that means that 99% of the available hosts are not contained in the table.

3.12.2. Unfortunately, there is no other easy source (that I'm aware of) to extract a list of hosts for inclusion in your host's table. So until recently at Fort Monroe, and still at some posts, the only other way the system administrator can find out about a host is through users attempting to send mail and being rejected, or occasionally from addresses published in trade journals and magazines. Sad, but true.

3.12.3. To make things even more unreliable, the NIC relies on the individual host administrators to keep information in the database current and up to date. Some administrators are very conscientious and others are not.

3.12.4. Other host administrators may handle things differently, but for the most part the hosts are not available simply due to lack of information. If you tell your administrator about a host you tried to get but could not, he can add it, probably overnight.

3.12.5. DDNNIC and InterNIC. These are the best tools we have for looking up information about various Internet hosts. The DDN Network Information Center (NIC) is best for DOD hosts. The InterNIC is non-DOD hosts. At Fort Monroe, the command DDNNIC typed at the arrow prompt on the Profs main menu screen will connect you to the DDN Network Information Center. We highly recommend trying this a few times. If your installation does not have the DDNNIC command available, you can always use their local telnet commmand and telnet to NIC.DDN.MIL (IP address 192.112.36.5) or telnet to RS.INTERNIC.NET (IP address 198.41.0.5) – that is essentially what the DDNNIC exec does.

4. TOOLS

4.1. Disclaimer: The Internet is advertised as a place where one can get the answer to any question. True--if one is unconcerned about the provenance of the answer, and one is in no hurry. There are professionally trained people who can answer a lot of reference and research-type questions for you. They may know how to use the net, or they may have other sources. If you have an urgent need for accurate, timely, data, you may well be best served by the nearest TRADOC library. TRADOC librarians can supply answers to most of the questions you're likely to try to answer on the Internet. They do the work, you don't have to learn the telnet version of the <copy> command. Librarians answer questions for a living. Try them out.

4.2 The vast number of host computers on the Internet--in excess of 100,000 in this country alone--and the huge amount of data stored in each one, can make searching for specific information an insuperably confusing business. Fortunately, there are tools developed to help users locate resources on the Internet Among them are Archie, GOPHER, HYTELNET, and WAIS. It's worth mentioning that these are, by my standards, primitive and awkward directory tools. However, with each passing week the tools get better, there are more of them, and more materials are made visible.

4.2. ARCHIE is a database that helps users search for documents and software that are available at different FTP archive sites. An Archie server lives on a host mainframe and collects filenames from many sites, then creates a database which can be searched. This is a relatively easy tool to use when you know the exact file you want, by name. Until you get fairly experienced you probably won't, though. Archie is a lousy subject-searching tool. If you want to find information on a particular subject, go somewhere you know they maintain such information, or call your librarian. When you search an Archie database, it gives you FTP site locations (addresses), the directory in which the file is located, number of bites in the file and the file name.

Some Internet Archie Servers:

archie.ans.net	147.225.1.2	ANS Archie Server
archie.rutgers.edu	128.6.18.15	Rutgers University
archie.unl.edu	129.93.1.14	Univ. Nebraska
archie.sura.edu	28.167.254.179	SURANET Archie Server
archie.au	139.130.4.6	Australian Server
archie.funet.fi	128.214.6.100	European Server
archie.doc.ic.ac.uk	146.169.11.3	UK/England Server
archie.kuis.kyoto-u.ac.jp	130.54.20.1	Japanese Server

Each of these Archies will collect and "index" filenames from the many hosts it communicates with each night. To connect to an Archie server:

1. TN archie.ans.net
   or
   TN 147.225.1.2
2. login: <archie>
3. type: <prog keyword> <enter>
   Example: prog military
4. <Quit> to end session.

This procedure will generate a list of filenames. Each filename will be shown with the host computer it is stored on. Archie searches strings, so instead of entering <prog military> one might enter <prog milit> or even <prog ilitar>

At this writing, Archie only searches one term at a time. Boolean searching does not work. Searching one term at a time can generate a very long list of matching filenames, which you can't interrupt. Despite it's being the best equivalent of an indexing tool we've seen, Archie can be genuinely frustrating. And of course, your next step must be to log into the various hosts cited and FTP the files. Remember that clever software engineers are constantly improving--or at least changing--things on the Internet, so by next year it might be quite different.

Note that Archie only indexes filenames. If someone named the file containing a recipe for chocolate-covered mice crash.burn, Archie won' t be much help because you would probably have entered something like <prog mice>.

4.3. GOPHER is a menu driven tool that allows you to search for resources on the Internet. This tool helps you access information by searching, retrieving and displaying information from remote sites. A computer running Gopher interacts with hundreds of computers all over the world to search for the information you need. With Gopher you don't have to bother with telneting to a particular address; it does it for you. Like any menu-driven system, it makes life much more orderly, but also limits your choices somewhat.

4.3.1 At this writing, there is a significant problem for everyone who gets to the Internet through Profs: Gopher does not work very well for us. Software is on order which everyone hopes will make it possible for our IBM mainframe to talk coherently to other people's Gophers. It should be installed at Fort Monroe in the first half of 1994. If interest warrants, it will be mounted at other installations. Until then, Gophers are something that we will hear a lot about but can't use very well. By the time you read this, the situation may have changed, but don't blame me, I'm writing as fast as I can.

4.3.2 If you are coming through Profs, you will get the menus in a very confusing screen display, although they can be read--barely--if you take tranquilizers frequently. You'll get weird screens full of scrambled menus interspersed with random passages of Hindu mythology written in Coptic, but was it supposed to be easy? These Gopher sites will lead you through a maze of resources, some of which may be useful as reference tools. Once you get used to them, they can be time-savers. This is an area where a TAC card might be useful, since using Gophers via Profs is irritating.

4.3.4 There are reportedly over 1200 Gopher sites now, and host administrators are bringing more on line steadily. See Chapter 9 for some selected sites to try out. As you read and surf more on the Internet you will find additional Gopher sites. Some organizations are bringing Gophers into being for a particular narrow subject area; others are opening up Gophers which access a wide range of diverse interests.

4.4. VERONICA is an acronym for Very Easy Rodent-Oriented Net-Wide Index to Computerized Archives. This is a new application which came into use in November 1992. Veronica indexes resources the Gopher software locates in somewhat the same way that Archie indexes FTP sites. It provides a keyword search of the menu titles from a large number of gophers, can create a personalized menu system just for you, and can directly link you to that title in the appropriate Gopher. Boolean capability is available. You will probably see this as one of the menu picks in Gopher.

4.5. HYTELNET is a Hypertext program that allows the user to connect to Internet-accessable databases and other information resources. We expect that TRADOC users will have a great deal of trouble trying to use this in a Profs environment, but you need to know the name.

4.6. WAIS. Wide Area Information Servers. WAIS (pronounced way-us) is supposed to actually search through the text of files at the hosts it is programmed to examine. It may search one or several hosts. As you can imagine, this is much slower than Archie and can give you a huge list of files that meet your search criteria. WAIS does rank its retrieved documents (files) to give you some idea of how likely it is to be useful.

4.6.1 The author tried out some WAIS sites and got confused and upset. One, for example, is available through the DDN Network Information Center (DDNNIC). Parts of the DDNNIC are excellent, but we had problems with WAIS. Like HYTELNET and Gopher, you will see the name repeatedly in the literature, and like them, it might work better if you can access the Internet via some other path than Profs.

4.7 At Fort Monroe, and many other installations, Profs is not the only method of reaching the Internet. At many places UNIX computers, AT&T 3B2 minis, certain LAN/WAN configurations, and many other setups exist which allow users to do things that the IBM/VM setup we've been discussing won't do, or won't do easily. If you feel you absolutely need to try out some of these functions, do so: speak to your ISO and DOIM. Get access to someone's special-purpose mini. Learn a few UNIX commands. You'll gain a lot--Gophers are more likely to work. Archie and Veronica will work. WAIS may not spoil your day, as it does mine.

On the other hand, Profs has its virtues. Easy to use, easy to teach. Widely used on the installation. You probably can't operate effectively without it, and how badly do you <u>really</u> want to learn yet another set of arbitrary and confusing computer commands?

4.8 At this writing, a controversy is going on about an action that the Defense Information Agency (DISA) wants to take. This manual takes no position on the merits of the argument, but the argument itself may be illuminating. You can skip this part with no penalty. It's not on the test.

Briefly, DISA proposes to route all communication between the MILNET and the rest of the Internet through one gateway. The gatekeeper would be DISA (surprise) and would restrict services thusly:

- Email would be unrestricted. Everyone in DOD and the rest of the world would be able to exchange notes. *However, to outsiders, every* MILNET address would change, so that
  username@monroe-emh1.army.mil
  would become
  username%monroe-emh1.army.mil@disa.gate
- FTP would be one-way only. We could get files from Internet hosts, but non-MILNET users could not FTP files from us.
- Telnet would be one-way. We could log into other people's computers, but they won't be able to log into ours.

DISA's main argument is security. Clearly, we can't have every sweaty-palmed undergraduate west of Annapolis logging into Defense computers and endangering the American Way of Life. Also, MILNET is a command and control net, not a vehicle for casual chat or even to support staffwork.

Information professionals and some far-sighted command figures will argue in return that it makes no sense to try to choke off the development of a valuable and evolving technological resource. Plenty of legitimate contractors need--or will soon need--access to our computers. They argue that it's foolish to restrict such a valuable resource.

The argument is in part technological, in part philosophical. It pits the admittedly chaotic and aggressively egalitarian forces who *built--and are building--the Internet against* the cautious bureaucrats who express perfectly legitimate reservations based on military requirements to standardize, control, restrict, codify, regulate. The same kind of conflict is going on all over the Internet, everywhere the wires reach. Information should be free! Universal access! Knowledge is power! There ain't no free lunch! Who's paying for this, anyhow? Control is necessary for efficiency!

NSA is reportedly trying to find ways to build greater security into individual hosts by eliminating "flaws" in the operating systems, for example quirks that allow strangers to log themselves in as users. There

probably is no final answer; more likely a series of compromises that do a fair job, irritate the users, keep out most if not all of the hackers, etc., etc. It'll be a while before these things get sorted out.

5. Security.

5.1 About security: all we can advise is be careful. No one who reads this will need to be reminded about putting classified information into an unclassified system. Nevertheless, we do remind the reader that the connected networks that make up the Internet are open, run over commercial lines, are not encrypted, and are accessible to just about everyone in the world. Clearly both operational security and security classification consciousness are appropriate. For more specific guidance please see your organization's security manager.

5.2 Unfortunately there is another issue, that of the physical security of your system. When you FTP files from another computer, you may bring an unwanted visitor along. Always check every file you retrieve with anti-virus software. At Fort Monroe virtually everyone has either McAffee Viruscan or Microsoft Anti-virus. Use them liberally. If you bring home a virus that destroys your hard disk or infects your local area network, NO ONE will show the slightest sympathy. **NO ONE!**

5.3 We're not saying you shouldn't go out and play, just use some common sense. Your ISO or DOIM can expand on this warning, and probably will do so.

6. WHY DO WE KEEP TALKING ABOUT UNIX? You can skip this part unless you want to be a hit at the kind of parties where ADPE historians hang out.

6.1 Seems like everything you read about the Internet implies intimacy with UNIX.

6.2 The reasons for that are rooted in the early history of the Internet. Back in the late sixties the Defense Department created ARPANET, a network of a few ery large computers on university campuses which allowed academics doing research for DOD to exchange scientific data. ARPANET introduced some techie things like dynamic rerouting, which was originally designed to prevent the net from collapsing due to enemy attack. (see below for more on dynamic rerouting)

6.3 It all turned out to be such an atractive idea that lots more colleges wanted in, and eventually for administrative reasons (don't ask) ARPANET was divided into MILNET and the now smaller ARPANET. Obviously, MILNET got the military sites; ARPANET got the academic ones.

6.4 As things turned out, most academic computing began moving away from central time-sharing mainframes to smaller, decentralized workstations. Pretty soon any self-respecting university had, not one, but hundreds of computers, all of which needed to talk to each other. UNIX, an operating system developed at the University of California at Berkeley specifically for networking, fit the bill. The operating system of choice soon became UNIX. Now, the huge majority of university computers use UNIX. And guess where you find a lot of smart guys with time on their hands who have to publish or perish?

6.5 As time went by, all the best books about the Internet got written by academic people. Naturally, a whole lot of software got written by and for them. Now, it's fair to say that a huge part of the Internet runs on UNIX. That's neither bad nor good, but it has implications for TRADOC.

6.6 TRADOC's computing architechture is based on one huge IBM mainframe running the VM operating system at each installation. (Yes, we know that's oversimplified, but bear with us.)

6.7 The software that allows our IBM mainframes to support Profs also makes it a bit complicated for us to connect to some of the other computers on the Internet. Obviously, we'd have little trouble connecting to, say, the University of Alabama, which has IBM and uses Profs, but that's an exception. Most of the academic, commercial and private sites out there are likely to be using UNIX. Many military minis and mainframes run UNIX too, so we'll have a little trouble there, too.

6.8 Among the problems--UNIX file names can be long and have many parts; VM filenames are eight characters with an eight character extension. Imagine the problems in transferring files from them to us. Or another situation--control characters in UNIX screen displays don't work on our terminals. Result: a menu that socially retarded undergraduates use easily looks like it was written in pigeon Farsi to us.

7. ETIQUETTE ON THE NET

7.1 It's just as well to remember a few common-sense rules of behaviour while communicating with the entire world. Remember that what you send to a discussion group may be read by thousands of people you've never met. If it's particularly interesting it will be copied and forwarded widely. And if one of the things you said was that your supervisor had just #$@^%&*(!#$ and that he has a !#@$*^$ in his !#@#$% you may discover that your supervisor listens to the same discussion groups you do.

7.2 Also, most of the host systems you will access have no organizational or contractual connection to you, or to TRADOC, or to the U.S. Government. Don't mess them up, blacken their or your name, unreasonably tax other people's resources, etc. etc. Since most Internet hosts have nothing to do with you, and are allowing you to use their toys out of what amounts to altruism, it is at least discourteous to whine at or about them. Think about what you do.

6. EXERCISES:

The following are a list of telnet sessions that you might want to try to become familiar with remote login. Remember, <TN> works at Fort Monroe. You may need to use <telnet> or something else. Several of these sources will guide you to files you can obtain via FTP. I have not tested all of these, and even if I had, they do change frequently. Explore freely.

****

8.1. The Military History Institute makes over 3,100 working bibliographies, which the MHI researchers and librarians have been creating over the years, available via the Internet. MHI calls this service "Refbibs On-line". TRADOC users may access them through PROFS. These bibliographies represent only materials held by MHI, but they are a rich and surprising resource. Also one of the easiest to access. Once you have identified a specific item from a bibliography that you need, your servicing library can request it from MHI. Again, you have to know how to use CMSNAMES nicknames.

1. Invoke the "send a note" option in PROFS.
2. Send the PROFS note to the following address:

INFO@CARLISLE-EMH2.ARMY.MIL

3. In the "Subject" field, enter the filename for the desired refbib. Be sure to include the extension ".asc" after the filename. The name is case sensitive, as in this example: BradleyO.asc

4. Leave the text portion of the note blank and send the message. You must send a separate PROFS note for each refbib you wish to transfer to your local computer.

When the message is received at Carlisle Barracks, the automatic response feature will locate the requested refbib and send it back to you as a Profs note. You may then forward the refbib as a Profs note, or convert it into your local word processing package and edit it as desired.

If the refbib is too long to fit inside a Profs note (many are), you will receive it as a file. Ask your ISO, IMO, or DOIM how to handle such files and how to transfer the information contained in such files, and in Profs notes, to your PC.

There are "help" and index files that will assist you in deciding which refbib(s) you want to transfer to your computer. MHI recommends that you transfer and read the USAMHI file first since it provides useful information on refbibs, what help files are available, and how to locate the electronic filename for transferring refbibs. The USAMHI file does not require the ".asc" extension. All refbibs do require the ".asc" extension.

****

8.2 LOCIS.

The Library of Congress Information System (LOCIS) is now available over the Internet. It's free and works well. (Note--the Library of Congress also has a Gopher system running, named MARVEL. This isn't it.)

<TN locis.loc.gov> or <TN 140.147.254.3>

LOCIS includes 15 million MARC records and 10 million records for other types of information: legislation, copyright, Braille and audio, organizations, and selected foreign legal materials. The National Referral Center Master File is a directory of more than 12,000 organizations qualified and willing to answer questions and provide information on many topics in science, technology and the social sciences.

Searching hours are M-F 0630-2130, Sat 0800-1700, Sun 1300-1700. Printed manuals are supposed to be available for sale and via FTP.

<FTP seq1.loc.gov>; after logging on then <cd /pub/LC.Online>. There should be a LOCIS Quick Search Guide and a LOCIS Reference Manual. LOCIS appears to include SCORPIO, the old LC automated catalog. Some basic commands:

sign on files: BEGIN (BGNS)
Sign off files: ENDS (END, ")

Search files & create sets: BROWSE (BRWS,B) FINS (FIND, F) SCAN Retrieve (RETR, R) EXECUTE (EXEC, C) SAVE SELECT (SLCT, SEL, S)

Display set contents DISPLAY (DSPL, D) NEXT (NXT, N)
Display list of sets HISTORY (HIST, H)

Modify sets: LIMIT (LIMT, L) KEEP RELEASE (RLSE) COMBINE (COMB, C) DROP

Help & explanations: HELP SHOW SET

To get HELP on commands: HELP and command name (e.g. HELP COMBINE)

Next Page, press ENTER
Return to search, type 9
Command menu, type 11
LOCIS menu, type 12

****

8.3 FedWorld: A National Technical Information Service (NTIS) system which provides access to more than 100 U.S. government computer bulletin boards, many of them previously accessible only by modem. (FedWorld is also accessible by modem and may actually be easier for TRADOC users to approach that way: dial (703)321-8020 with the modem settings at 2400-N-8-1.) This is a bulletin board which connects the user to other bulletin boards and as a result, dialing one number can reach an astonishing amount of information, including full text of selected U.S. government publications, statistical files, federal job announcements, and more. However, as with any menu system with hundreds of picks, patience and diligence are required. Below is a recent download of government sources that can be reached through FedWorld. (The list will probably have changed by the time you read this.)

Telnet to: fedworld.gov or 192.239.92.201

2:ALF (USDA)	National Agricultural Library BBS
3:ALIX (Lib of Congress)	Automated Library Information eXchange
4:BOM-BBN(Dept of Interior)	Bureau of Mines-Bulletin Board Network

5:ISM-SIS (IRS)	ISM Support Info System
6:CIC-BBS (GSA)	Consumer Information Center
7:CLU-IN (EPA)	Superfund Data and Information
8:CPO-BBS (Census)	Lists open jobs at the Census Dept
9:CRS-BBS (Dept of Justice)	Amer. With Disabilities Act Info
10:Computer Security (NIST)	Computer Sys Lab Computer Security BBS
11:DCBBS (DC Govt)	DC Government Information
12:DMIE (NIST/CSL)	NIST/CSL Data Management Information
13:EBB (Dept of Commerce)	Economic data and information
14:ELISA System (DoD)	DoD Export License Tracking System
15:GSA/IRM BBS (GSA)	Information Resources Management Issues
16:EPUB (Dept of Energy)	Energy information and data
17:FDA's BBS (FDA)	FDA info and policies
18:FDA/DMMS (FDA)	PMA, IDE, 510k & guidance documents
19:FERC-CIPS BBS(D/Energy)	Fed Energy Regulatory Commission
20:FEBBS (Fed Highway Ad)	FHWA information and data
21:FRBBS (NIST)	FRBBS - Info on Fire Research
22:FEDERAL BBS (GPO)	GPO and Govt Data (Fee Based)
23:OSS-BBS (GSA)	GSA On-line Schedules System
24:Eximbank BBS	Export/Import Bank data and info.
25:JAG-NET (U.S. Navy)	Navy Judge Advocate General
26:Labor News(Dept of Labor)	Dept of Labor information and files
27:Megawatt 1(DofEnergy)	Information on energy and DoE
28:NADAP (US Navy)	Navy Drug and Alcohol Abuse Prevention
29:NAVTASC (US Navy)	NAVCOMTELSTA Washington DC
30:EHSC-DDS	Army Engineering & Housing
31:NDB-BBS(Dept of Agricul)	Human Nutrition Information Service
32:NSSDCNASA\Goddard	The NASA NODIS Locator System.
33:1040 BBS (IRS)	Electronic Tax Filing Information
34:SBB-BB (Treasury)	Surety Bond Branch, Circular 570
35:OIS (Bureau of Prisons)	US Bureau of Prison employees
36:SBIR-BBS (NASA)	NASA Small Business Innovation Research
37:WTTE-BBS (EPA)	Wastewater Treatment Info Exchange
38:QED-BBS (USGS)	Quick Epicenter Determ and EQ data
39:SALEMDUG-BBS (FEMA)	State and local FEMA user groups
40:SBA On Line (SBA)	SBA Information and data (9600 bps)
41:SBA On Line (SBA)	SBA Information & Data (2400 bps)
42:SBAI-BBS (SBA)	Small Bus. Admin internal BBS
43:Sample Weather Data (NWS)	Sample data from Fee Based System
44:OPM Mainstreet	OPM - Job Info, Personnel Guidance
45:TELENEWS(D/Energy)	Data and info on Fossil fuels
46:USA-GPCS BBS (Army)	Army Info System Software
47:USCS-BBS (Customs)	Customs and Exchange Rate Data & Info
48:USGS-BBS (USGS)	Geological Survey BBS/CD-ROM Info
49:NLPBB (Navy)	CNO's Navy Leadership Policy BB
50:FMS-BBS (U.S. Treas)	Inventory management data & programs
51:OASH-BBS (HHS)	Health & AIDS Information & Reports
52:FEDIX	Links Fed Data to Higher Education
53:DASC-ZE(Def Log Agency)	PC Info and files
54:GPSIC (Coast Guard)	GPS, Loran & Omega Info/status
56:EPIC-BBS (EPA)	Pollu. Preven, Clean Product, Ozone
57:Gulfline (EPA&NOAA)	Gulf Coast Pollution Information
58:FAA Safety Exchange (FAA)	Small Plane Safety Reports & info
59:NTIS QuikSERVICE	Order NTIS Documents Online
60:LC News Service (LOC)	Library of Congress News Service
62:MI-BBS (DoE)	DoE Minority Impact Bulletin Board
63:TECH SPECS (NRC)	Technical Specifications Improvement Pr
64:Census-BEA (Census)	Census BEA Electronic Forum
65:IHS-BBS (HHS)	Indian Health Service BBS
66:NOAA-ESDD (NOAA)	NOAA Earth System Data Directory
67:Offshore-BBS (Interior)	Off Shore Oil & Gas Data
68:TQM-BBS (T. Gram)	Total Quality Management
69:NIDR Online (NIH)	Nat. Institute of Dental Research
70:NIHGL (NIH)	Nat. Inst. of Health Grant Line BBS
71:PayPerNet #1 (OPM)	Fed. Pay & Performance Management BBS
72:PayPerNet #2 (OPM)	Fed. Pay & Performance Management
73:CASUCOM (GSA)	Interagency Shared Services/Resources
74:ATTIC (EPA)	Alternative Treatment Tech Info Center
75:NCJRS-BBS (DoJustice)	National Criminal Justice Reference Sy
76:DRIPSS (EPA)	Drinking Water Info Processing Support
77:PIM BBS (EPA)	Pesticide Information Network

78:SWICH BBS (EPA&SWANA)	Solid Waste Management
79:NPS-BBS (EPA)	Nonpoint Source Program BBS
80:OEA BBS (DoInterior)	Interior's Off of Environment. Affairs
81:Metro-Net (US Army)	Army Morale, Welfare, and Recreation
82:CABB (Dof State)	Passport Info/ Travel Alerts
83:BUPERS Access (Navy)	Navy Personnel Information
84:FCC-State Link (FCC)	FCC daily digest & carrier stats/report
85:HUD-N&E BB (HUD)	HUD News & Events BB. Press Releases
87:FREND #1 (Natl Archives)	Fed. Register Electronic News Delivery
88:FREND #2 (Natl Archives)	Fed. Register Electronic News Delivery
89:NHS-BBS (HHS)	National Head Start BBS
90:WSCA-BBS (Dof Labor)	Board of Wage & Service Contract Appeal
91:TEBBS (OGE)	Office of Government Ethics BBS
92:HSETC MD (Navy)	Naval Health Sci Edu & Training Command
93:PPCUG/RDAMIS (DoD)	Pentagon Users Group BBS
95:CBEE (Coast Guard)	Coast Guard On-Line Magazine & News
96:ATD BBS (FAA)	Air Transport Div. BBS
97:ATOS-BBS (FAA)	Air Traffic Operations Service BBS
98:AEE BBS (FAA)	FAA Office of Environment & Energy
99:OCA BBS (PRC)	Postal Rate Commission/Consumer Advocat
100:GEMI (GSA)	GSA Electronic Management Information
101:Airports BBS #1 (FAA)	Airport operators and designers
102:EnviroNET (NASA)	Space Environment Information Service
103:FAA HQ BBS (FAA)	FAA Headquarters BBS
104:IRS-SOI (IRS)	Public Taxpayer Statistical Information
105:ARA-BBS (FAA)	Aviation Rulemaking Advisory BBS
106:IIAC BBS (US Army)	Integration & Analysis Center BBS
108:ACF-BBS (HHS)	Admin. for Children and Families
109:NTIA-BBS (D/Commerce)	Radio Freq. Management Issues
110:ED Board (Dept of Ed)	Dept of Ed Grant & Contract Info
111:BHPr-BBS (HHS)	Medical & Health Services Information
112:Marine Data BBS (NOAA)	Marine Databases & Files
113:Call-ERS BBS (nfo	
114:Call ERS (USDA)	Economic Research Line Service Line 2
115:ABLE INFORM (Dof Ed)	Disability & Rehab Data & Info
117:PerMasNet (Dof State)	US Agency for International Development
118:Quick Facts! (NIAAA/HHS)	Alcohol Abuse & Alcoholism Information
123:IBNS/OMPAT BBS (DoD)	Military Performance Assessment
124:EDOS (DC Crt Appeals)	US Court of Appeals, District of Columb

****

8.4. Folio is a large information handling system which contains the catalog of the libraries of Stanford University, and several other bibliographic files. One of several interesting menu picks is the Martin Luther King, Jr. Bibliography, which lists over 2,700 bibliographic references to works that deal with the life and work of Dr. King and the Civil Rights Movement. There are a number of commercial services listed in Folio which are unavailable to users who are not affiliated with Stanford; the system will tantalize you with them but will not let you use them. This is becoming a common phenomenon; vendors of specific information products often license their use to customers based on the prospective number of users. Obviously they would be destroying their own markets if anyone in the country could log in.

1. <TN FROSYTHETN.STANFORD.EDU> or <TN 36.54.0.12>
2. At the Account? prompt type: <SOCRATES>
3. At the ok to proceed? type: <yes>
4. At the type of terminal prompt type: <vt100>
5. Follow the on-screen instructions
6. Type <Exit> to leave

****

8.5. Choice Book Reviews at CARL. Choice is a magazine that provides evaluative book reviews of nonfiction books for libraries. It's aimed at academic libraries. If you want serious book reviews, try this,

but also speak to your local librarian. There are many other sources for reviews, and Choice only covers a tightly-defined slice of the publishing market.

This is actually a part of the Colorado Alliance of Research Libraries (CARL) system. CARL is a great place to poke around. You can log into about a hundred online library catalogs, if you like that sort of thing.

1. <TN PAC.CARL.ORG> or <TN 192.54.81.128>
2. No Password Required
3. Choose option 3 Information Databases
4. Choose option 60 Choice Book Reviews

I also recommend the UnCover database (select "Current Article Indexes"). UnCover allows you to search keywords in titles and abstracts found in the tables of contents of some 14,000 periodicals. It's clumsy and crude by professional librarian standards, but interesting. Although your librarian can do a much faster and more comprehensive job finding journal articles if you're really doing research, this database can help you get started at your desk. Note that there's no charge for UnCover, but you can order the articles delivered to you by Fax or mail for a fee.

You'll have to look closely at the screen displays because you'll have the same problems I described for Gophers--control characters don't read right and the menus are sometimes messy. Worth a look.

****

8.6. Dante Poetry. Project Dante at the Dartmouth College Online System contains material pertaining to Dante's Divine Comedy. I can't for the life of me figure out how this will benefit TRADOC, but it's out there.

1. <TN LIBRARY.DARTHMOUTH.EDU> or <TN 129.170.16.11>
2. No Password Required
3. Login: <Connect Dante>

****

8.7. The Electronic Freedom Foundation makes available information on the current presidential administration and other documents related to government and issues relating to intellectual freedom in electronic and computer communication.

1. <FT FTP.EFF.ORG> or <FT 192.88.144.4>
2. At the name prompt, enter: <Anonymous>
3. At the password prompt, enter your E-Mail Address in DDN format
4. At the Command Prompt, enter: <cd pub/academic/civics>
5. Request the file(s) by entering: <get filename>
6. After transfer, enter: <quit>

Some of the files are:

Addresses to write the President, Vice-President and cabinet members
filename: administration.address

Phone and Fax numbers of the 103rd Congress
filename: congress.phones

Information on Affirmative Action

filename: affirmative-action.info

Contact information for Clinton Cabinet
filename: cabinet.contact-info

The Constitution of the United States
filename: constitution.us

The Declaration of Independence
filename: dec_of_ind

Federalist Paper #10
filename: federalist-paper-10

****

8.8. 1992 Presidential Campaign Resources

1. <FT info.umd.edu> or <FT 128.8.10.29>
2. At the name Prompt, enter: <Anonymous>
3. At the password prompt , enter: <your e-mail address>
4. At the command prompt, enter: <cd info/Government/US>
5. You can enter <dir> to look at the files and directories or retrieve the one you want with the <get> command.
6. After transfer, enter <quit>.

****

8.9. Text of historical documents. Good source for materials your librarian doesn't keep in your library, or if you want a machine-readable version to put in your word processor.

1. <FT NPTN.ORG> or <FT 192.190.49.8>
2. At the Name prompt, enter: <Anonymous>
3. At the Password prompt, enter: <your email address>
4. At the Command prompt, enter: <cd pub/e.texts/freedom.shrine>
5. Request file(s) by entering: get <filename(s)>
6. After transfer, enter: <quit>

Some of the many files this directory contains:

DOCUMENT	FILENAME
Magna Carta	magna
The Constitution of the Iroquois Nations	iroquois
The Mayflower Compact	mayflo
The Fundamental Orders of 1639	orders
First Thanksgiving Proclamation	thanks
Declaration and Resolves of the 1st Continental Congress	resolves
The Paris Peace Treaty	paris
The Annapolis Convention	anap
The Constitutional Transmittal Letter	xmittal
The Constitution of the United States	constit
The Bill of Rights	rights
1971 All amendments	amend

The Northwest Ordinance	nw
Lincoln's Second Inaugural Address	lincoln2
German Surrender Documents	german
Japanese Surrender Documents	japan
M. L. King's: I have a dream" Speech	dream

****

8.10. Soviet Archives at the Library of Congress. Full-text documents about the Soviet System, Chernobyl, Cuban Missile Crisis etc. A sampling of the many documents are below.

1. FT to SEQ1.LOC.GOV or 140.147.3.12
2. At the name prompt, enter: <Anonymous>
3. At the password prompt, enter <your Email Address>
4. At the Command prompt, enter: <cd pub/soviet.archive/text.english>
5. Enter <dir> to look at the files or retrieve the one you want with the <GET> command.
6. After transfer, enter <QUIT>

SUBJECT	FILENAME
Internal Workings of the Soviet Union	a0intro.bkg
Repression and Terror: Stalin in Control	a1stalin.bkg
	a2rykov.doc
Repression & Terror: Kirov Murder & Purges	b1kirov.bkg
	b2bukhnar.doc
	b3centcm.doc
Secret Police	c1police.bkg
	c2unprss.doc
Chernobyl	n1chernb.bkg
	n2constr.doc
Cold War: Soviet Perspectives	w1sovper.bkg
	w2compar.doc
Cold War: Cuban Missile Crisis	x1cuba.bkg
	x2jfk.doc

****

8.11 Environmental Protection Agency Online Library System: Provides access to the online catalogs of EPA libraries; separate databases with citations for sources about environmental financing, chemicals, hazardous waste and lake management; and a directory of sources of environmental information. Includes news alerts from EPA. This is an IBM system running VM--easy to read screens even if you don't always understand the logic of the system. Tab to get the cursor beside a selection you want to work with; we haven't figured out how to use the command line. It also appears to work with the pesky problem of a userid or password, despite what the first screen implies.
Telnet to: epaibm.rtpnc.epa.gov or 134.67.180.1 / public / ols

****

8.12 Food and Drug Administration Bulletin Board System: Full text of FDA news releases, enforcement reports, import alerts, drug and product approval lists, Federal Register summaries, informational publications, articles from FDA Consumer, etc.
Telnet to: fdabbs.fda.gov or 150.148.8.48
login:bbs

****

8.13 General Accounting Office Reports: Full text of GAO high risk, technical, transition and other reports. (also available via gopher, at wiretap.spies.com / government docs)
Telnet to: ftp ftp.cu.nih.gov / user:anonymous / password:guest / cd gao-reports

****

8.14 National Space Science Data Center: NASA database provides access to space science data held by research centers worldwide.
Telnet to: nssdca.gsfc.nasa.gov or 128.183.36.23
username:nodis

****

8.15 PENpages: Pennsylvania State University system provides the full text of thousands of documents about agriculture, food and nutrition, family issues and more.
Telnet to: psupen.psu.edu or 128.118.36.4
username:penpages

****

8.16 Spacelink: National Aeronautics and Space Administration system provides access to NASA news releases, shuttle status reports, mission summaries, NASA congressional testimony and speeches and many other files with current and historical information about NASA aeronautics and space research. Even allows users to ask NASA scientists questions.
Telnet to: spacelink.msfc.nasa.gov or 192.149.89.61
username:newuser / password:newuser

****

8.17 Statistics Canada Daily Reports: Full text of daily statistical releases, lists of publications and more from Statistics Canada, the Canadian government's primary compiler of statistics.
Telnet to: info.carleton.ca / terminal type:decvt100 / statistics canada daily reports

****

8.18. Project Gutenberg is trying to get all the English literature in the world in full text electronic format. These are complete books, often in compressed format. There are several Gutenberg sites you can try, and at least one competing project. These are BIG files, usually compressed, and may take a loooong time to download. Plus, then you end up with The Last of the Mohicans on your hard disk, which who would want?

1. <ft mrcnext.cso.uiuc.edu> or <FT 128.174.201.12>
2. At the name prompt, enter <Anonymous>
3. At the password prompt, enter <GUEST>
4. At the Command prompt, enter: <cd etext/etext (91,92,93)>
depending on the year you want.
5. Example: <cd etext/extext93>
6. Enter <dir> to look at the filenames or retrieve the one you want with the <get> command.
7. After transfer, enter <quit>

Note: Look at the size of the files before you transfer them. Practice on the smaller ones. FTP can take time. Some of the thousands of texts available:

cd etext/etext91

TEXT NAME	FILENAME
1990 CIA World Factbook	world12x.xxx
Aesop's Fables	aesop11x.xxx
Alice in Wonderland	alice29x.xxx
Book of Mormon	mormon13.xxx
Federalist Papers	feder12x.xxx
Hunting of the Snark	snark12x.xxx
Moby Dick	mobyxxxx.xxx
Paradise Lost	plboss11.xxx
Peter Pan	peter14a.xxx
Roget's Thesaurus	roget11x.xxx
Song of Hiawatha	hisong11.xxx
Through the Looking Glass	lglass16.xxx

cd etext/etext92

1991 CIA World Factbook	world91a.xxx
Aesop's Fables (Advantage)	aesopa10.xxx
Data From the 1990 Census	uscen901.xxx
Far From the Madding Crowd	crowd13x.xxx
Frederick Douglass	duglas10.xxx
Herland (for Mother's Day)	hrlnd10x.xxx
New Etext of Bible (KJV)	bible10x.xxx
O Pioneers! Willa Cather	opion10x.xxx
Paradise Lost (Raben)	plrabn11.xxx
Scarlet Letter	scrlt10x.xxx
Sophocles' Oedipus Trilogy	oedip10x.xxx
Time Machine-HG Wells	timem10x.xxx
War of the Worlds-HG Wells	warw10xx.xxx
Zen & the Art of the Internet	zen10x. :.xxx

NOTE: the filenames are case sensitive.

****

8.19 Archie is a system for locating files that are publicly available by anonymous FTP (File Transfer Protocol). Archie only locates, it does not transfer. There are many Archie "servers" (that is, programs) and the one at Rutgers is typical. Archies are often heavily used, and Rutgers often blocks non-university users out during peak hours.

TN archie.rutgers.edu or TN 128.6.18.15

Login: <archie>

Archie>prog clinton

Host ftp.concert.net (192.101.21.1)
Last updated 08:28 4 Jun 1993

Location: /concert/doc/newsletter/winter1993
File -rw-r--r-- 3823 bytes 11:16 3 Jan 1993 clinton.article

Host ftp.edvz.univie.ac.at (131.130.1.4)
Last updated 11:54:33 4 Feb 1993

Location: /mac/info-mac/card
file -rw-r--r- 663090 bytes 00:00 8 Aug 1992 clinton.issues.hqx

Archie> <quit> (ends Archie session and returns you to your installation mainframe)

To access the file, clinton.article, the user must login to the host computer ftp.concert.net; the numeric addess is 192.101.21.1.

<ftp 192.101.21.1> (Anonymous login to the remote host)

Then follow the file location information like a map:
1.<cd concert> (This changes the directory to the concert subdirectory)

2. <cd doc> (This changes to the concert/doc subdirectory)

3. <cd newsletter> (This changes to the concert/doc/newsletter subdirectory)

4. <cd winter1993> (This changes to the concert/doc/newsletter/winter1993 subdirectory)

5. <get clinton.article> (this will transfer the file from their host computer to your Profs A disk)

6. <quit> This ends the FTP session and returns you to your own installation host.

7. Now, use whatever local procedure you have to download clinton.article from your installation host to your PC.

9. NOW SOME GOPHER SOURCES

9.1 Gophers are the hot issue right now on the Internet. Half the host administrators on the planet seem to be setting them up. Many are highly specialized, others cover broad spectra.

9.2 True, at this writing these aren't easily available through Profs, but those readers who have other connections to the Internet may be interested. And, fairly soon, Fort Monroe should be able to facilitate entry into gophers (note my use of the conditional). These are not telnet addresses--you will probably have to go through the gopher client software resident on your host (that's technobabble for "It'll work when it works. Be patient and wait for the oracles from the high priests of the mainframe."). Please note that I have not tested these.

9.3 Here are some of the earlier sites which popularized the software. It reduces the overall load on the Internet communications lines to use the ones closer to you, but you can reach any of them. All of these have very heavy loads of users, however, and may be quite crowded during normal business hours. Which, since we can reach clear around the globe, is now 24 hours/day.

Host Name	IP	Login	Area
consultant.micro.umn.edu	134.84.132.4	gopher	North America
scilibx.ucsc.edu	128.114.143.4	gopher	North America
gopher.uiuc.edu	128.174.33.160	gopher	North America
panda.uiowa.edu	128.255.40.201	panda	North America
gopher.sunset.se	192.36.125.2	gopher	Europe
info.anu.edu.au	150.203.84.20	info	Australia
gopher.chalmers.se	129.16.221.40	gopher	Sweden
tollen.puc.cl	146.155.1.16	gopher	South America
ecnet.ec	157.100.45.2	gopher	Ecuador
gopher.ora.com	140.186.66.1	gopher	commercial host

9.4 Steve Herro, Head of Reference and Information Services at St. Norbert College Todd Wehr Library, recently compiled a list of "well constructed gophers." It's reasonable to assume that they would be good places to practice gophering.

- North Carolina State University--Gopher to dewey.lib.ncsu.edu:70
- Gopher Jewels at University of Southern California--Gopher to cwis.usc.edu.
- InfoSlug at University of California Santa Cruz--Gopher to scilibx.ucsc.edu:70.
- WiscInfo at University of Wisconsin Madison--gopher to gopher.adp.wisc.edu or telnet to wiscinfo.wisc.edu.
- Legal Information System at Washburn Law School--telnet acc.wuacc.edu, login <law> or <washlaw>.
- University of Durham (UK)--gopher to delphi.dur.ac.uk 70.
- MountainNet's AMI Gopher--gopher to gopher.mountain.net
- University of California Irvine--gopher to peg.cwis.uci.edu
- Dept. of Education--gopher to gopher.ed.gov
- Kent State University--gopher to refmac.kent.edu 70

9.5 One commonly cited gopher concerns itself with governmental affairs. This will give an idea of the broad scope provided by gophers. While this is useful, and can do some things that may be very helpful to TRADOC action officers, don't forget to speak to your friendly neighborhood librarians. They can help you find information in much greater detail than this, and can direct you to unexpected sources. For the following sources, gopher to wiretap.spies.com and then search out the right part of the menu system.

- General Accounting Office Reports: Full text of certain GAO reports. You can reach these reports through FTP, although in that case you must figure out a host of subdirectories and filenames. (Or, try ftp to ftp.cu.nih.gov / user: anonymous / password: guest / cd gao-reports.)
- Canadian Documents: Full text of the Canadian Constitution Act, Meech Lake Accord, Charlottetown Constitutional Agreement and other historic Canadian government documents.
- Citizens Guide to Using the Freedom of Information Act: Full text of a popular government guide to obtaining information using the Freedom of Information Act.
- Fair Credit Reporting Act: Full text of the act, as taken from the U.S. Code.
- Historical Documents. Full text of dozens of historic U.S. government documents from the time of independence to the present day.
- Maastricht Treaty on European Union: Full text of the latest addition to the Treaty on European Union signed at Maastricht in 1992.
- North American Free Trade Agreement: Full text of NAFTA.
- Patent Office Reform Panel Final Report: Full text of a U.S. Patent and Trademark Office report recommending that U.S. patent procedures be changed to follow policy held by most industrialized nations.
- Political Platforms: Full text of the platform statements of the major parties in the 1992 presidential election, along with other major platform statements.
- President Clinton's Economic Plan: Full text of A Vision of Change for America, a summary of the President's economic plan presented to a joint session of Congress in February.
- Presidential Documents from the Federal Register: Full text of presidential determinations, proclamations, executive orders and other documents published in the Federal Register.
- Speeches and Addresses: Full text of historic U.S. speeches.
- United Nations Resolutions: Full text of select United Nations resolutions.
- World Constitutions: Full text of constitutions of select countries worldwide. Other constitutions can be accessed by conducting a Gopher veronica search, using "constitution" as the keyword
- World Factbook (1990-1992): Full text of the Central Intelligence Agency-produced World Factbook, which provides information about the geography, people, government, economy, communications and defense of countries around the world.
- AIDS Related Information: National Institutes of Health database provides AIDS statistics, daily summaries of articles on AIDS in major newspapers, full text of AIDS Treatment News, reports from the National Commission on AIDS, pamphlets about AIDS and more.
- Americans With Disabilities Act: Full text of the 1990 act.
- Americans With Disabilities Act Documents: Collection of documents about the ADA, including the Department of Justice technical manual.

****

9.6 For the following sources, gopher to sunsite.unc.edu and then search out the right part of the menu system.

- Budget of the United States Government: Full text for FY93 and FY94; FY94 can be searched by keyword.
- National Performance Review (Reinventing Government): From Red Tape to Results: Creating a Government that Works Better and Costs Less, the 180-page report of Vice President Al Gore's task force on reinventing government.
- White House Information: Full text of major policy statements, daily press briefings, speeches, proclamations, the president's daily schedule and more.

****

9.7 The Library of Congress recently opened MARVEL, a gopher, in addition to their LOCIS system. TRADOC users can use LOCIS easily; unfortunately there does not seem to be much overlap between the

two systems. MARVEL has Congressional information, Census data, White House documents, crime statistics, State Department reports, etc. If your Internet service includes a local gopher client, type <gopher marvel.loc.gov 70> to reach LC MARVEL's main menu. If you have telnet but no gopher client, you get to the main menu by typing <telnet marvel.loc.gov> and then logging in as marvel. No password is required.

- Catalog of Federal Domestic Assistance: Information about hundreds of government assistance programs, administered by more than 50 federal agencies. Can be searched by keyword.
- Congressional Directories: Library of Congress system provides access to a variety of Congressional directories; some can be searched by keyword.
- Government-Sponsored Bulletin Board Systems: Lists U.S. government computer bulletin boards accessible by modem.
- National Archives and Records Administration: Provides access to detailed information about audiovisual and electronic records held by the National Archives.
- NavNews: Full text of the Navy News Service, distributed weekly to Navy operations worldwide, providing official news and information about fleet operations and exercises, Navy policy, budget actions and more.
- Navy Policy Book: Full text of the Navy policy manual, which provides official statements on the Navy mission, objectives and policy, for use by Navy personnel.
- Back issues of the Navy News Service, including a full-text search capability.

****

9.8 Many gopher systems lead you to other gophers at remote locations. This is often referred to as "tunneling through gopherspace." This server provides one stop access to more than a dozen U.S. government gopher systems.
To access: gopher stis.nsf.gov / other U.S. government gopher servers

****

9.9 AskERIC: Archive of education information compiled by *AskERIC, an Internet question-answering* service for teachers and educators at Syracuse University.
To access: gopher ericir.syr.edu

****

9.10 Campaign '92 and Election Results: Full text of key position papers, speeches, press releases and other documents from major candidates in the 1992 presidential election. Other White House information, such as full text of major policy statements, daily press briefings, speeches, proclamations, the president's daily schedule and more.
To access: gopher tamuts.tamu.edu / browse information by subject / political science

****

9.11 CancerNet: Full text of National Cancer Institute fact sheets, publications about cancer, patient diagnosis statements, Genetic Sequence Data Bank: National Library of Medicine database of nucleotide sequences, as well as relevant bibliographic and biological annotation.
To access: gopher helix.nih.gov / molecular biology databases

****

9.12 Census of Population and Housing: 1990 Census data available in text and Lotus 1-2-3 formats for U.S. cities, counties, metropolitan areas, states and the nation, with comparisons from 1980. Speeches from the 1992 Presidential Campaign: Full text of major speeches by Bill Clinton, George Bush and Libertarian Party candidate Andre Marrou.
To access: gopher bigcat.missouri.edu / reference center

****

9.13 Chemical Substance Fact Sheets: Full text of Environmental Protection Agency fact sheets about hundreds of chemicals; can be browsed or searched by keyword.
To access: gopher ecosys.drdr.virginia.edu / education / environmental fact sheets

****

9.14 Another gopher with a broad range of interests, particularly including legislative affairs.

- Code of Federal Regulations: Experimental system provided by a commercial vendor allows users to browse the code or search it by keyword. Access to the complete CFR is not yet available. The system places limits on the amount of information non-subscribers can retrieve.
- Congressional Committee Assignments: Provides current Congressional committee rosters; can be browsed or searched by keyword.
- Congressional Information: Provides access to Congressional directories, committee rosters, North American Free Trade Agreement documents, Americans with Disabilities Act, the U.S. budget and more.
- Executive Branch Resources: Provides access to U.S. executive branch directories, White House information, NAFTA documents, full text of the U.S. budget and more.
- Gross State Product Tables: U.S. Bureau of Economic Analysis tables estimating the value of goods and services for 61 industries in 50 states.
- Radio Free Europe/Radio Liberty Research Institute Daily Report: Full text of a daily digest of the latest developments in Russia, Transcaucasia and Central Asia, and Central and Eastern Europe.

****

9.15 Congressional Information: Provides access to Congressional and agency directories, biographies, lists of Congressional firsts, information about women in Congress and more. Congressional firsts: List of firsts for the 103rd Congress. Full text of Supreme Court decisions issued since 1989. Brief biographies of Court justices. Full text of the U.S. constitution, amendments and articles.
To access: gopher info.umd.edu

****

9.16 Cooperative Extension System: U.S. Department of Agriculture system provides access to extension service directories, fact sheets, calendars, nutritional data, information on national initiatives related to agriculture, food information and more.
To access: gopher cyfer.esusda.gov

****

9.17 Criminal Justice Country Profiles: Full text of a series of United Nations reports on crime and criminal justice in 123 countries. Most include statistics.
To access: gopher uacsc2.albany.edu / united nations justice network / u.n. criminal justice country profiles

****

9.18 Earth Science Data Directory: U.S. Geological Survey system provides keyword access to sources of earth science data worldwide.
To access: gopher scilibx.ucsc.edu / the researcher / science and engineering / earth and marine sciences

****

9.19 State Department Travel Advisories: An archive of State Department travel information and advisories. Arranged by country, files include current conditions, country descriptions, entry requirements, embassy and consulate locations, information about registration, medical facilities, drug penalties, crime and more. Frequently updated data about recent earthquakes worldwide.
To access: gopher gopher.stolaf.edu /internet resources

****

9.20 Educational Resources Information Center (ERIC): Provides keyword access to bibliographic information and abstracts for a variety of articles and publications about education and related disciplines.
To access: gopher cwis.syr.edu / library, suinfo and data archives / eric

****

9.21 Federal Information Exchange: Provides information about federal education and research programs, scholarships, fellowships, grants, minority education and research programs, procurement opportunities and more.
To access: gopher fedix.fie.com

****

9.22 Federal Jobs: Lists thousands of federal government job openings, taken from a variety of Office of Personnel Management computer bulletin boards.
To access: gopher dartcms1.dartmouth.edu

****

9.23 Food Labeling Information: FDA database provides access to documents about new food labeling regulations and activities related to the Nutrition Labeling and Education Act.
To access: gopher zeus.esusda.gov / other usda and government information / food labeling information

****

9.24 Great Lakes Information Network: Provides information on environmental and economic development issues concerning the eight states that are members of the Great Lakes Commission.
To access: gopher gopher.cic.net

****

9.25 Health Security Act of 1993: Full text of President Clinton's health plan and related documents, including his speech to a joint session of Congress in September in which he outlined the details of the plan. Full text of the National Information Infrastructure Agenda, a Clinton administration report describing the role of government in promoting the development of the telecommunications and information infrastructure by the private sector.
To access: gopher ace.esusda.gov / americans communicating electronically

****

9.26 Material Safety Data Sheets: Though not technically government information, material safety data sheets are produced by chemical manufacturers to comply with a variety of government regulations. They provide safety data on hundreds of chemicals.
To access: gopher isumvs.iastate.edu / isu research information / msds

****

9.27 Merit Network Information Center: Michigan consortium provides information about the Internet, NSFNET and MichNet, including General Accounting Office and Office of Management and Budget reports, National Research and Education Network (NREN) activity, conference proceedings, newsletters, statistical reports, policy statements, user's guides and more.
To access: gopher nic.merit.edu

****

9.28 Morbidity and Mortality Weekly Report: Full text of the Centers for Disease Control and Prevention weekly journal, available long before libraries receive the paper edition.
To access: gopher odie.niaid.nih.gov / aids related information

****

9.29 National Environmental Data Referral Service: National Oceanic and Atmospheric Administration (NOAA) catalog provides keyword access to sources of environmental information nationwide.

To access: gopher scilibx.ucsc.edu / the researcher / science and engineering / environmental science / noaa national environmental referral service

****

9.30 National Institute of Allergy and Infectious Disease: Full text of NIAID press releases, AIDS information publications, institute directories and more.
To access: gopher gopher.niaid.nih.gov

****

9.31 National Institute of Standards and Technology: Provides accessto a variety of NIST files.
To access: gopher gopher-server.nist.gov

****

9.32 National Institutes of Health: Provides access to a broad range of NIH resources, including institute phone books and calendars, library catalogs, molecular biology databases, full text of the NIH Guide for Grants and Contracts, files containing AIDS and cancer information and more.
To access: gopher gopher.nih.gov

****

9.33 National Library of Medicine: Full text of library fact sheets and current bibliographies.
To access: gopher el-gopher.med utah.edu / health sciences resources on the internet

****

9.34 National Science Foundation: Provides access to grant information, NSF directories and phone books, press releases, full text of select NSF publications and more.
To access: gopher stis.nsf.gov

****

9.35 National Weather Service Forecasts: Provides weather forecasts, current weather conditions, information on earthquakes, tropical storms and auroral activity for the 50 states and Canada.
To access: gopher ashpool.micro.umn.edu / weather

****

9.36 Senate Bibliographies: Bibliographies of Senate hearings, prints and publications for the 99th through the current Congresses.
To access: gopher dewey.lib.ncsu.edu

****

9.37 United Nations: Full text of U.N press releases, U.N. Conference on Environment and Development reports, United Nations Development Programme documents, U.N. telephone directories, United Nations Conference on Environment & Development Documents, documents pertaining to the June 1992 Rio de Janeiro conference,and more.
To access: gopher nywork1.undp.org

****

9.38 U.S. Geological Survey: USGS Gopher system provides information about the agency, its publications and data as well as miscellaneous information about geology, hydrology, cartography and geographic information systems.
To access: gopher info.er.usgs.gov

****

9.39 U.S. Geological Survey Weekly Seismicity Report: Full text of a weekly overview of earthquake activity around the world.
To access: gopher somalia.earth.nwu.edu / seismology resources

****

9.40 University of Illinois Weather Machine: Provides current conditions, National Weather Service forecasts, severe storm warnings, flood summaries, earthquake bulletins, upper air conditions, satellite images and more for the 50 states, Canada, Mexico and the Caribbean.
To access: gopher wx.atmos.uiuc.edu

****

9.41 World Health Organization: Provides access to world health statistics, WHO press releases, full text of selected WHO publications and more.
To access: gopher gopher.who.ch

****

9.42 Zip Codes: Database of U.S. zip codes, searchable by keyword.
To access: gopher gopher.uoregon.edu / desktop reference /geographic and travel information

Enough. I hope that by the time you get this you can reach Gophers, and submerge yourself in nice warm data

GLOSSARY

A disk.
The "A disk" is the private section of Profs where your files reside. It is a virtual disk drive, meaning that it doesn't really exist, but you can act like it does. The place to which FTP files will come. The place to which you upload files from your PC. The place from which you send files to others on Profs.

Anonymous FTP.
see FTP. A method of transferring files in which the initiater may enter a distant computer without having to be a registered user of it. Not really anonymous, of course, since the remote computer must know your email address in order to send files to it.

Archie.
Software which automatically checks a large number of FTP sites, collects filenames, and indexes them for easier retrieval.

Computer conference.
see discussion group. Software which accepts and redistributes electronic mail among members. Usually mediated by a system administrator. Usually confined to a discrete topic, but sometimes free-ranging. A method of communication among physically separated parties who have Internet access.

Discussion group.
see computer conference.

DDN.
Defense Data Network. The electronic network which the Defense Department maintains. If you are reading this you are a part of DDN.

Defense Data Network Network Information Center.
The DDNNIC is an excellent source of information about DOD hosts. It can also locate some (not many) email addresses for individuals. Currently, DDNNIC has a link to the InterNIC, a source of information about non-DOD Internet hosts.

Domain.
The part of an Internet address that tells the system or location, and what type of organization it is. The trailing domain is usually one of the following:

.com	Company or other commercial institution
.edu	Educational institution
.gov	Civilian governmental site
.mil	Military site
.net	Gateways and other administrative hosts for a network
.org	private organizations that don't fit the other domains

Email.
Method of communication in which written notes are exchanged between specialized computer systems.

FTP.
File Transfer Protocol. Widely accepted method of transferring files between computers.

Gopher.
Software following a simple protocol for tunneling through a TCP/IP Internet. A menu interface to carry out many common Internet tasks, including connection to many hosts.

Host.
A large computer. Also called mainframe. Each TRADOC installation has a host, an IBM which runs the VM operating system; sometimes called a TISI. Can also refer to a minicomputer hooked up to the net. Under some circumstances (which you probably don't want to know) can even refer to a desktop micro.

IP address.
The numeric form of an Internet address, for instance 134.84.132.4, when the mnemonic address is consultant.micro.umn.edu. Frequently more identifiable to your mainframe, so always good to get this when you can.

TAC.
Terminal Access Card. Authorization to dial into one of a number of DOD hosts. Allows different kinds of access to the network. Because not using VM, TAC sites can allow for different kinds of screen displays and different keyboard mapping. Useful if you go through Profs and access a menu system which shows up on your system as a screen full of hieroglyphs. Sites listed in DDNNIC. Discuss with your sysad.

TCP/IP.
Transmission Control Protocol/Internet Protocol. A standard set of programs which computers on the Internet depend upon to accomplish data transmission.

Telnet.
A program, widely used, which allows a user of one computer to log into a distant computer and perform work as if he was registered on it.

Veronica.
Very Easy Rodent-Oriented Net-Wide Index to Computerized Archives. New application which came into use in November 1992. veronica indexes resources that Gopher software locates in somewhat the same way that Archie indexes FTP sites. Provides keyword search of menu titles from a large number of gophers, and can create your own personal menu system for specific subjects. Boolean capability. Menu pick in Gopher.

WAIS.
Wide Area Information Server. Another form of index to Internet resources. Searches the text of files in remote hosts to find keywords you enter.

World Wide Web.
Complex and extremely sophisticated system run by CERN in Switzerland. Instead of treating all knowledge as a hierarchical series of menu choices, as does Gopher, it treats information as hypertext and allows the user to dive from one document to another via hypertext links.

BIBLIOGRAPHY

These are titles that I see over and over in other people's bibliographies, or that I have used. Each has its virtues. The list is oriented toward beginners on the Internet.

Gibbs, Mark & Richard Smith. Navigating the Internet. Sams, 1993. $24.95 ISBN: 0672303620 Highly readable, well organized. Extensive list of resources.

Henry, Marica K. and Linda Keenan, Michael Reagan. Search sheets for OPACs on the Internet: A Selective Guide to U.S. OPACs Utilizing VT100 Emulation. Meckler, 1991. $39.50 ISBN: 0887367674 Getting a little out of date, but still an interesting list of accessible library catalogs.

Internet World (formerly Research & Education Networking). Monthly periodical from Meckler, c. 16pp. Newsletter, features, user tips, interviews, conferences, calendars, some technical material. ISSN 1064-3923. Pricey at $97 institutional, $59 personal.

Kehoe, Brendon P. Zen and the Art of the Internet: A Beginners Guide to the Internet. 2nd Ed. Prentice Hall, 1993. ISBN: 0130107783 $22.00 An absolute must for anyone getting into this mess. The first edition was never published commercially but was made available as a file that anyone could FTP--a sort of high-tech samizdat publishing. The Prentice-Hall edition is the one to get now, though.

Krol, Ed. The Whole Internet User's Guide & Catalog. Sebastopol, CA: O'Reilly & Associates, 1992. ISBN: 1565920252 $24.95 Wonderful guidebook and travelogue. This and Kehoe are our choices for best buys.

LaQuey, Tracy and Jeanne C. Ryder. The Internet Companion: A Beginner's Guide to Global Networking. Addison-Wesley, 1993. ISBN: 0201622246 $10.95 Beginner's guide to global networking. Forward by Al Gore.

Levine, John R. and Carol Baroudi. The Internet for Dummies. IDG Books, 1993. ISBN 0568840241 $19.95 Excellent book for beginners. Very accessable writing style. Try this, Krol, or Gibbs first.

On Internet 1993: An International title and subject guide to electronic journals, newsletters, books, and discussion lists on the Internet. Meckler, May 1993. ISBN: 0887369294 $45.00

OPAC Directory 1992: An Annual Guide to Online Public Access Catalogs and Databases. Meckler, January 1993. ISBN: 0887368832 $60.00 Have only seen Meckler's advertisements, but appears to update Henry, above.

Tennant, Roy and John Ober, Anne G. Lipow. Crossing the Internet Threshold: An Instructional Handbook. Berkeley, CA: Library Solutions Press, 1993. Useful as a tutorial and teacher's guide but not as good to start with as Levine, Krol, or Gibbs.

Varallo, Barbara, ed. DDN new User Guide--Final Draft Third Edition. Defense Technical Information Center, April 1993. Ordering number ADA262860. Policies, concepts, conventions of the MILNET. Hard to read but good grounding for our business.

APPENDIX A

Hosts in the TRADOC network

Nodeid	DDN Host Name	DDN IP Address
BEN1	BENNING-EMH1.ARMY.MIL	192.153.150.2
BLI1	FTBLISS-EMH1.ARMY.MIL	192.101.141.2
BRA2	BRAGG-EMH2.ARMY.MIL	192.153.148.2
DIX1	DIX-EMH1.ARMY.MIL	192.108.178.2
EUS1	EUSTIS-EMH1.ARMY.MIL	155.217.1.2
FOR3083	PENTAGON-HQDADSS.ARMY.MIL	134.11.6.1
GOR1	GORDON-PROFS.ARMY.MIL	147.51.100.1
HAR1	N/A	
HOD1	HOOD-EMH1.ARMY.MIL	150.113.1.2
HUA1	HUACHUCA-EMH11.ARMY.MIL	138.27.100.4
HUA2	HUACHUCA-HUA2.ARMY.MIL	138.27.200.3
JAC1	JACKSON-EMH1.ARMY.MIL	192.172.16.2
KNO1	KNOX-EMH1.ARMY.MIL	147.238.100.2
LEA1	LEAV-EMH.ARMY.MIL	192.33.5.5
LEE1	LEE-EMH2.ARMY.MIL	132.159.60.21
MCC1	MCCLELLAN-EMH1.ARMY.MIL	192.172.11.2
MON1	MONROE-EMH1.ARMY.MIL	192.111.52.10
RUC1	RUCKER-EMH3.ARMY.MIL	192.129.64.3
SIL1	SILL-EMH.ARMY.MIL	192.132.84.2
WOO1	WOOD-EMH1.ARMY.MIL	192.172.17.2

Appendix B

Yanoff List of Internet Connections

This list is updated every two weeks. You may find versions of it available as FTP files on many hosts. You'll see the command <finger> a number of times on the Yanoff list, but it does not work for us.

Subject: Special Internet Connections (Scott Yanoff, UWM)

```
          * SPECIAL INTERNET CONNECTIONS:    Last Update: 1/21/94 *
          * Compiled By:  Scott Yanoff -  yanoff@csd4.csd.uwm.edu *
     * A * by an entry designates new entries/changes since last update *

* Type "finger yanoff@csd4.csd.uwm.edu" to find ways to receive this list!

* HTML versions of this list are produced bi-weekly, FTPable from csd4.csd...

 -Agricultural Info.,   telnet psupen.psu.edu or telnet 128.118.36.5
   Family Issues,        PENpages (Login: Enter your two-letter state abbrev.)
   Food & Nutrition,    telnet caticsuf.csufresno.edu or telnet 129.8.100.15
   and Environment       CSU Fresno ATI-NET                  (Login: super)
                        telnet eureka.clemson.edu or telnet 130.127.8.3
                         CUFAN (Clemson U Forestry & Ag. Net.) (Login: PUBLIC)
                        telnet empire.cce.cornell.edu or telnet 132.236.89.2
                         CENET (Cornell Extension NETwork)     (Login: guest)
                        ftp ftp.sura.net (get file pub/nic/agricultural.list,
                         it contains agricultural email lists & services.)
                        telnet idea.ag.uiuc.edu (Login: flood) See FLOOD Below
   offers: Agricultural info (livestock reports, current market prices, etc.)

 -Almanac mail servers  mail almanac@esusda.gov or mail almanac@ecn.purdue.edu
                        mail almanac@oes.orst.edu or mail almanac@ces.ncsu.edu
                        mail almanac@silo.ucdavis.edu
                        mail almanac@joe.uwex.edu or almanac@wisplan.uwex.edu
   offers: USDA market news, articles about use of computer in agricultural
           science, and Extension Computing Technology Newsletters.
    In body of letter: send guide  Other cmds: send catalog, send help baylist

 -Almanac of Events     finger ccpi@oddjob.uchicago.edu
                        mail geiser@pictel.com to join the mailing list!
   offers: Daily list of events and b-days in history, and sports schedules.

 -Am. Philos. Assoc.    gopher apa.oxy.edu
   offers:  BBS for philosophers.

 -Amateur Radio          mail info@arrl.org or ftp world.std.com (pub/hamradio)
   offers: Ascii files about Amateur Radio and electronics.
   In Body of letter: help, info, send <filename> or quit (ie send prospect)

 -Archeological Dbase   telnet cast.uark.edu or telnet 130.184.71.44
   offers: National Arch. Database information management system. (Login: nadb)

*AVIATION-------------------------------------------------------------------
 -Aviation Gophers      gopher av.eecs.nwu.edu
                        telnet gopher.unomaha.edu (Select UNO Student Org...)
   offers: Acts as a repository for things on rec.aviation. (pics, stories...)

 -DUATS                 telnet duat.gtefsd.com or telnet 131.131.7.105
                        telnet duats.gtefsd.com or telnet 131.131.7.106
   offers: Aviation weather, flight planning. (Login: <last name>)
    ? ) first address is for certified pilots, the second for uncertified.
 ---- ----------------------------------------------------------------------

 -Career Centers Online gopher gopher.msen.com
                        mail occ-info@mail.msen.com
   offers: Jobs database, resume listing service, search by location/keyword
           M.E.A.R.T.   telnet career.com or telnet 157.151.160.1
   offers: Search for jobs by company, position, or state.

 -CARL                  telnet pac.carl.org or 192.54.81.128
   offers: Online database, book reviews, magazine fax delivery service.

 *COMPUTERS------------------------------------------------------------------
```



```
 -Amiga User Area       gopher gopher.unomaha.edu (Select UNO Student Org...)
   offers: Lots of useful information for Amiga owners.

 -Macintosh Usergroup   telnet amdalinz.edvz.uni-linz.ac.at or 140.78.5.55
   offers: Austrian Mac group.  UserID/Password (hit return).
 ----------------------------------------------------------------------------

 -Consumer Access Serv. telnet columbia.ilc.com or 38.145.77.221 (Login: cas)
                        telnet holonet.net or telnet 157.151.0.1 (Login: cdc)
                        telnet books.com or telnet 192.148.240.9 (press return)
                        telnet netmark.com or telnet 192.246.101.1
                        telnet orders.sales.digital.com or 192.208.36.2
                        telnet cio.cisco.com or 131.108.89.33 (Login: cio)
   offers: Search for/buy CDs, books, software, and video tapes online!

 -Dartmouth Library     telnet library.dartmouth.edu or 129.170.16.11
   offers: Divine Comedy and reviews.                  (connect dante)
           Read/Find passages in the King James Bible  (select file bible)
           Read/Find passages in Shakespeare's plays   (select file s plays)
           Read/Find passages in Shakespeare's sonnets (select file s sonnets)

 -DataBase Via Finger   finger help@dir.su.oz.au
   offers: Query databases, find newsgroups, access archie, etc., via finger.

 -ECHO                  telnet echo.lu or telnet 158.64.1.36
   offers: European Commission Host Organization, free databases! (Login: echo)

*ECONOMICS/BUSINESS---------------------------------------------------------
 -Econ. Working Papers telnet netec.mcc.ac.uk     (Login: netec)

 -Economic BBS          telnet infopath.ucsd.edu or gopher infopath.ucsd.edu
   Choose: News & Services | Economic Bulletin Board     (Login: infopath)

 -Stock Market Reports telnet a2i.rahul.net or telnet 192.160.13.1
   offers: Select a, "Menu: Current Info", then "Market Report" (Login: guest)
  Vienna Stock Exchange telnet fiivs01.tu-graz.ac.at  (Login: BOERSE)
 ----------------------------------------------------------------------------

*EDUCATION/TEACHING/LEARNING------------------------------------------------
 -Distance Ed. Dbase    telnet acsvax.open.ac.uk or telnet 137.108.48.26
   (Username: ICDL  Account Code: USA  Password: aaa)

 -Education Gophers     gopher ernest.ccs.carleton.ca 419  (Canada's SchoolNet)
                        gopher gopher.ed.gov           (U.S. Dept. of Education)
                        gopher chronicle.merit.edu      (Merit Computer Network)
    Empire Schoolhouse telnet nysernet.org or 192.77.173.2 (Login: empire)
   offers: Provides K-12 resources, discussion groups, etc.

 -FEDIX/MOLIS/HERO      telnet fedix.fie.com or telnet 192.111.228.33
   offers: info. on scholarships, minority assistance, etc.

 -IKE                   telnet isaac.engr.washington.edu or 128.95.32.61
   offers: IBM Kiosk for Education User Discussion Forums. (Login: register)

 -KidLink Gopher        telnet kids.ccit.duq.edu or telnet 165.190.8.35
   offers: Telecomm. project aimed at 10-15 year olds.  (Login: gopher)

 -Learning Link         telnet sierra.ful.edu or telnet 198.49.171.2
   offers: Electronic info. & communication service  (Login/password: newuser)

 -MicroMUSE             telnet michael.ai.mit.edu or telnet 18.43.0.177
 MariMUSE               telnet pc2.pc.maricopa.edu 4220 or 140.198.16.12 4220
   offers: Educational Multi-User Simulated Environments.  (Login: guest).

 -Nat'l Education BBS   telnet nebbs.nersc.gov or telnet 128.55.128.90
   offers: A limited-access system for NESP educators. (Login: new)
```

-Nanaimo SchoolsNET telnet crc.sd68.nanaimo.bc.ca or telnet 134.87.128.1
offers: Education-based BBS (Login: GUEST) (See also: NICOL)

-Newton telnet newton.dep.anl.gov or telnet 130.202.92.50
offers: BBS for those teaching/studying sci., CS, math. (Login: bbs)

-QUERRI telnet isn.rdns.iastate.edu or telnet 129.186.99.13
offers: Questions on Univ. Extension. Regional Research Info (Login: querri)

-Fax via Internet mail info@awa.com ('HELP' in body of message)
ftp ftp.pandora.sf.ca.us (get pub/elvis/faxgate.help)

-Finger via Telnet telnet site 79 (example: telnet cs64.csd.uwm.edu 79)
'site' is the place you are fingering. Once connected, type the username.
via Mail mail b.liddicott@ic.ac.uk w/ subj. '@finger user@site'

*FTP----------

-Archie telnet archie.au or 139.130.4.6 (Aussie)
telnet archie.edvz.uni-linz.ac.at or 140.78.3.8
telnet archie.univie.ac.at or 131.130.1.23 (Austria)
telnet archie.funet.fi or 128.214.6.102 (Finland)
telnet archie.th-darmstadt.de or 130.83.128.111 (Ger.)
telnet archie.kuis.kyoto-u.ac.jp or 130.54.20.1 (Japan)
telnet archie.sogang.ac.kr or 163.239.1.11 (Korea)
telnet archie.nz or telnet 130.195.9.4 (New Zealand)
telnet archie.inesc.pt or 146.193.0.153 (Portugal)
telnet archie.luth.se or telnet 130.240.18.4 (Sweden)
telnet archie.ncu.edu.tw or telnet 140.115.19.24 (TWN)
telnet archie.doc.ic.ac.uk or 146.169.11.3 (UK/Ireland)
telnet archie.hensa.ac.uk or 129.12.21.25 (UK/Ireland)
telnet archie.sura.net or 128.167.254.194 (USA [MD])
telnet archie.unl.edu or 129.93.1.14 (USA [NE])
telnet archie.ans.net or 147.225.1.10 (USA [NY])
telnet archie.rutgers.edu or 128.6.18.15 (USA [NJ])
telnet de.internic.net or 198.49.45.10 (AT&T)
offers: Searches all ftp sites for any program you want. (Login: archie)

-Archie Mail Servers mail archie@<INSERT ONE OF ABOVE ADDRESSES HERE>
Subject: help offers: alterative Archie access to those w/o ftp or telnet.

-FTP via EMail mail ftpmail@decwrl.dec.com
Subject: (hit return) Body-of-letter: help (return) quit
mail ftpmail@grasp.insa-lyon.fr
Body-of-letter: help. Please, European users only.
mail bitftp@pucc.princeton.edu
mail ftpmail@doc.ic.ak.uk
mail BITFTP@DEARN or to BITFTP@vm.gmd.de (Europe only)
mail ftpmail@ftp.uni-stuttgart.de
Body-of-letter: help or ftplist for a list of anon. ftp sites.

-FTP Sites/Archives ftp ocf.berkeley.edu or ftp 128.32.184.254
offers: cd /pub/Library for great lib. of docs, bible, lyrics, etc.
ftp wuarchive.wustl.edu or ftp sunset.cse.nau.edu
offers: Gifs, Sights, & Sounds! ftp sounds.sdsu.edu for the sounds archive
ftp ftp.uu.net or ftp rtfm.mit.edu
offers: You name it, it's here! (Archives, FAQs, how-to's, etc.)
ftp archive.umich.edu or sumex-aim.stanford.edu
offers: Software for MS-Dos computers, Mac, Amiga, Apple2, Apollo...
ftp oak.oakland.edu
offers: A huge software archive for PCs and UNIX.
ftp ftp.sura.net (/pub/nic) or ftp quartz.rutgers.edu
offers: How-to's about internet (email, ftp, telnet, etc.) (/pub/internet)
ftp quartz.rutgers.edu or ftp cathouse.org
offers: All the text/humor files you'd want (tv, sex..) cd pub/humor

-FTP via Telnet telnet grind.isca.uiowa.edu or telnet 128.255.200.3
offers: Access UIowa's huge FTP site via telnet!

---

*GAMES/RECREATIONAL/FUN/CHAT----------

-Backgammon Servers telnet fraggel65.mdstud.chalmers.se 4321 (Login: guest)
mail ldb-help@midnight.wpi.edu w/ subject 'help'

-Bridge Server telnet 140.117.11.33 (Login: okbridge)

-Bolo Tracker telnet gwis.circ.gwu.edu 1234 or 128.164.140.37 1234
offers: Location of current bolo games.

-Chat Clients ftp ftp.santafe.edu (4M Chat Service: /pub/SIG/4m)
ftp csd4.csd.uwm.edu (ICB Chat Service: cd pub/tjk)
ftp cs.bu.edu (IRC Chat Service: cd /irc/clients)
Get chat client program from ftp sites, compile program (make) and execute.
telnet sci.dixie.edu 1 | sh or 144.38.16.2 1 | sh
telnet rush.cc.edu 1 | sh
MEM: The above gets AND compiles automagically an IRC client for UNIX.

-Chat Servers - IRC telnet sci.dixie.edu 6677 or telnet 144.38.16.2 6677
telnet exuokmax.ecn.uoknor.edu 6677 or 129.15.20.11
telnet irc.tuzvo.sk 6668 or telnet 192.108.157.3 6668
telnet irc.nsysu.edu.tw (Password: irc)
TRY compiling own client rather than using these. (See above) (Login: irc)

-Chat Services telnet 128.112.4.12 1420
Somewhere telnet 129.118.41.9 2010
FootHills telnet marble.bu.edu 2010 or telnet 128.197.10.75 2010
The Coffee House telnet 128.198.1.116 2525
Olohof's BBS telnet morra.et.tudelft.nl 2993
DS9 telnet 128.8.11.201 3000
+Starship telnet 129.108.3.7 3000
Mansion II telnet 163.200.97.1 4000
?telnet 128.250.20.3 4000
+Elec. Night Club telnet 129.215.162.64 4001 (Evenings Only)
Leaky House telnet upsun.up.edu 4000 or telnet 192.102.10.63 4000
CyberEden telnet rivendel.slip.umd.edu 5000 or 128.8.11.201 5000
Virtual Campus telnet indigo.lut.ac.uk 6000 or 158.125.102.4 6000
+Davenport Beach telnet 129.74.80/116 7777
Tele-Chat telnet speedway.net 7777

-Chess Server telnet rafael.matiu.ucab.edu 5000 or 128.111.246.2 5000

-Chinese Chess telnet coolidge.harvard.edu 5555 or 128.103.28.15 5555
telnet hippolytos.ud.chalmers.se 5555 or 129.16.79.39

-Cookie Server telnet astro.temple.edu 12345 or telnet 129.32.1.100
telnet argo.temple.edu 12345 or telnet 129.32.32.102
offers: Funny quote or saying everytime you telnet there.

+Crossword Server telnet next7.cas.muohio.edu 8888 or 134.53.14.117 8888
offers: Internet server devoted to crossword games such as Scrabble.

-Cyber-Sleaze Report finger hotlist or adam@mtv.com (Also: gopher mtv.com)
offers: Daily reports on entertainers and such.

-Diplomacy mail judge@morrolan.eff.org or judge@d'pvax.dsto.gov.au
mail judge@shrike.und.ac.za or judge@u.washington.edu
offers: Play the Avalon Hill game Diplomacy via email. Body-of-letter: help
Note: No new games are forming on the u.washington Judge, but substitute players are still needed.

-Fingers for Fun finger info or graph@drink.csh.rit.edu

```
                    finger coke@cs.cmu.edu
  offers: Status of drink and candy machines for fun.
                    finger franklin@ug.cs.dal.ca
  offers: Random Star Trek/TNG quotes, and Almanac Information.
                    finger cyndi@magnus1.com or cyndi@198.242.50.4
  offers: Weekly Trivia

 -Game Server           telnet castor.tat.physik.uni-tuebingen.de
  offers: Tetris, Moria, Hetback, MUDs, Text Adventures, etc.  (Login: GAMES)

 -GO Server             telnet hellspark.wharton.upenn.edu 6969

 -Othello/Reversi       telnet faust.uni-paderborn.de 5000 or 131.234.28.29
 ------------------------------------------------------------------------

*GEOPHYSICAL/GEOGRAPHICAL/GEOLOGICAL----------------------------------------
 -Earthquake Info.      finger quake@geophys.washington.edu or 128.95.16.50
                        telnet geophys.washington.edu (Login/password: quake)
                        telnet bison.cc.buffalo.edu (select INDX & Bib. server)
   offers: Recent quake info (location, time, magnitude, etc.)

 -Geographic Server     telnet martini.eecs.umich.edu 3000 or 141.213.99.9 3000
   offers: Info by city or area code (Population, Lat./Long., Elevation, etc).

 -Global Land Info Sys  telnet glis.cr.usgs.gov or telnet 152.61.192.54
   offers:Land use maps of U.S., graphs/data of geological info (Login: guest)
 ------------------------------------------------------------------------

 -Gopher                telnet consultant.micro.umn.edu or telnet 134.84.132.4
                        telnet seymour.md.gov or telnet 128.8.10.46
                        telnet gopher.msu.edu or telnet 35.8.2.61
                        telnet twosocks.ces.ncsu.edu or telnet 152.1.45.21
                        telnet cat.ohiolink.edu or telnet 130.108.120.25
                        telnet ENVIROLINK.hss.cmu.edu     (Password: envirolink)
                        telnet wsuaix.csc.wsu.edu / 134.121.1.40(Login: wsuinfo)
                        telnet telnet.wisc.edu            (Login: wisc-pp)
                        telnet infoslug.ucsc.edu or 128.114.143.25   (INFOSLUG)
                        telnet infopath.ucsd.edu          (Login: infopath)
                        telnet sunsite.unc.edu or telnet 152.2.22.81
                        telnet uxl.cso.uiuc.edu or telnet 128.174.5.59
                        telnet panda.uiowa.edu or telnet 128.255.40.201
                        telnet inform.umd.edu or telnet 128.8.10.29
                        telnet grits.valdosta.peachnet.edu or 131.144.8.206
                        telnet gopher.virginia.edu / 128.143.22.36(Login: gwis)
                        telnet ecosys.drdr.virginia.edu or 128.143.86.233
                        telnet gopher.ORA.com or telnet 140.186.65.25
                        telnet nicol.jvnc.net or 128.121.50.2    (Login: NICOL)
                        telnet finfo.tu-graz.ac.at or 129.27.2.4  (Login: info)
                        telnet info.anu.edu.au or 150.203.84.20   (Login: info)
                        telnet tolten.puc.cl or telnet 146.155.1.16     (Chile)
                        telnet gopher.denet.dk or telnet 129.142.6.66 (Denmark)
                        telnet gopher.th-darmstadt.de or telnet 130.83.55.75
                        telnet ecnet.ec or telnet 157.100.45.2         (Ecuador)
                        telnet gopher.uv.es or telnet 147.156.1.12       (Spain)
                        telnet gopher.isnet.is or telnet 130.208.165.63 (Iceland)
                        telnet siam.mi.cnr.it or telnet 155.253.1.40    (Italy)
                        telnet gopher.torun.edu.pl or 158.75.2.5        (Poland)
                        telnet info.sunet.se or telnet 192.36.125.10    (Sweden)
                        telnet gopher.chalmers.se or 129.16.221.40      (Sweden)
                        telnet hugin.ub2.lu.se or telnet 130.235.162.12(Sweden)
                        telnet gopher.brad.ac.uk or 143.53.2.5     (Login: info)
  offers: Access to other services, gophers, documents, etc.   (Login: gopher)

 -Gopher                gopher english-server.hss.cmu.edu
  offers: Most comprehensive gopher I've seen so far, it gets its own entry!
```



```
 -GopherMail            mail gophermail@ncc.go.jp or mail gophermail@calvin.edu
  offers: Email access to gopher for those with mail-only access to Internet.

 -Ham Radio Callbooks   telnet callsign.cs.buffalo.edu 2000 / 128.205.32.2 2000
                        telnet ns.risc.net or 155.212.2.2 (Login: hamradio)
  offers: National ham radio call-sign callbook.  (Also: Amateur Radio above)

 -History Databases     telnet ukanaix.cc.ukans.edu or telnet 129.237.1.30
  offers:  History databases (Login: history) and CIS info (Login: ex-user)
                        ftp byrd.mu.wvnet.edu / ftp 129.71.32.152(/pub/history)
                        telnet clus1.ulcc.ac.uk or telnet 192.12.72.60
  offers: Docs, archives, comprehensive history server(Login/Password: ihr-uk)

 -HP Calculator BBS     telnet hpcvbbs.cv.hp.com or telnet 15.255.72.16
  offers:  BBS for HP Calc. users, with chat mode.  (Login: new)

 -Hpcwire               telnet hpcwire.ans.net or telnet 147.225.1.51
  offers: Excellent menu-driven information searches. (Login: hpcwire)

 -Hytelnet Server       telnet access.usask.ca or telnet 128.233.3.1
                        telnet info.ccit.arizona.edu or 129.196.76.201
                        telnet laguna.epcc.edu or 192.94.29.3  (Login: library)
                        telnet info.anu.edu.au or 150.203.84.20 (Login:library)
                        telnet library.adelaide.edu.au (Login: access)
                        telnet nctuccca.edu.tw or 140.111.1.10          (TAIWAN)
                        telnet info.mcc.ac.uk or telnet 130.88.200.15
                        telnet rsl.ox.ac.uk or telnet 129.67.16.31
  offers: univ. & library catalogues around the world. (Login: hytelnet)

 -IEEE SPAsystem        telnet stdsbbs.ieee.org or telnet 140.98.1.11
  offers: Standards Process Automation System.  (Login: guest)

 -Internet Guides/Docs  gopher una.hh.lib.umich.edu (Select: inetdirs)

 -InterNIC              telnet rs.internic.net or telnet 198.41.0.5
  offers: Gopher, WAIS, Whois, finger, TONS of Internet info, book orders, etc

 -IP Address Resolver   mail resolve@cs.widener.edu
                        mail dns@grasp.insa-lyon.fr  (body of letter: help)
  usage: in body-of-letter: site <address here>  Mails you IP address of site.

*LAW------------------------------------------------------------------------
  -Access               telnet access.uhcc.hawaii.edu or telnet 128.171.7.167
    offers: Legislative Info. Service, Hawaii State Legislature.

  -Gopher LAW Servers   telnet fatty.LAW.cornell.edu or telnet 132.236.108.5
                        telnet gopher.LAW.csuohio.edu or telnet 137.148.22.51
                        telnet acc.wuacc.edu or 192.104.1.2  (Login: washlaw)
    offers: Law info. via gopher.  (Login: gopher)

  -Law Library          telnet liberty.uc.wlu.edu or telnet 137.113.10.35
                        ftp sulaw.law.su.oz.au (cd /pub/law)
    offers: Law libraries and legal research.  (Login: lawlib)
            Offers copies of laws for each state/computer laws, and more!

  -LawNet               telnet lawnet.law.columbia.edu or telnet 128.59.176.81
    offers: Law/Judicial info and catalogs access.  (Login: lawnet)

  -Supreme Court Rulings ftp ftp.cwru.edu
    offers: ASCII files of Supreme Court rulings in directory /hermes

  -WWW Law Servers      telnet www.LAW.indiana.edu or telnet 129.79.131.170
                        telnet fatty.LAW.cornell.edu or telnet 132.236.108.5
    offers: Hypertext access to legal documents (Login: www)
 ----------------------------------------------------------------------------
```

-Library Catalogs ftp dla.ucop.edu (pub/internet/libcat-guide)
offers: "Library Catalogs on the Internet: Strategies for Selection and Use" document (how, but not where; also get one of the following).
ftp ftp.unt.edu (library/libraries.txt)
offers: "Accessing Bibliographic Databases" document.
ftp ariel.unm.edu (library/internet.library)
offers: "Internet-Accessible Catalogs and Databases" document.

-LIBS telnet nessie.cc.wwu.edu or telnet 140.160.240.11
telnet info.anu.edu.au or telnet 150.203.84.20
telnet garam.kreonet.re.kr or 134.75.30.11 (Login: nic)
offers: Access to nearly all online services seen in this list.(Login: LIBS)

-List of Lists ftp crvax.sri.com or ftp 128.18.30.65
offers. List of interest groups/email lists in /netinfo/interest-groups.

?Matchmaker by Email mail perfect@match.com with "SEND FORM" in body of msg
offers: Will reply with instructions and questionnaire.

*MEDICAL/HEALTH/BIOLOGY/GENETICS----------
-Anesthesiology Gopher gopher eja.anes.hscsyr.edu
offers: Lots of medical info, archives, and positions.

-Biological Services mail grail@ornl.gov ("help" in body of message)
offers: Service predicting intron-exon splice sites in vertebrate genes.
telnet atcc.nih.gov or telnet 156.40.144.248
offers: American Type Culture Collection (Login: search Password: common)
gopher life.anu.edu.au
offers: Access to lots of biological sciences information.

-CancerNet mail cancernet@icicb.nci.nih.gov
offers: Cancer info. statements thru email. Body-of-letter:help or spanish
gopher gopher.nih.gov (Health & Clinical Information/)
gopher gan.ncc.go.jp
telnet txcancer.mda.uth.tmc.edu or telnet 129.106.60.97
offers: Texas Cancer Data Center. (Login: TCDC) (See also: NICOL)

-CHAT telnet debra.dgbt.doc.ca or telnet 142.92.36.15
offers:Interactive AIDS & Epilepsy docs,simulated conversation(Login: chat)

-Educational Tech Net telnet etnet.nlm.nih.gov or telnet 130.14.10.123
offers:Forums and discussion groups on medical tech. and edu.(Login: etnet)

-Genetics Banks mail gene-server@bchs.uh.edu
mail retrieve@ncbi.nlm.nih.gov
mail blast@ncbi.nlm.nih.gov ("help" in body of message)
mail genmark@ford.gatech.edu
mail blocks@howard.fhcrc.org
mail cbrg@inf.eths.ch ("help" in body of message)
mail QUICK@EMBL-Heidelberg.DE
mail NETSEQ@EMBL-Heidelberg.DE
Subject: help offers: genetic database/nucleic acid/protein sequence.

-Genomic Database telnet morgan.jax.org or telnet 192.43.249.17
offers: Genomic Database of the Mouse. (Login: guest)

-Handicap/Med. Sites ftp handicap.shel.isc-br.com or ftp 129.189.4.184
offers: anonymous ftp of software and medical info.
telnet bongo.cc.utexas.edu or telnet 128.83.186.11
offers: Aids user in finding disability assist. equip. & serv.(Login: tatp)

-Monochrome telnet mono.city.ac.uk or telnet 138.40.17.1
offers: Multi-user messaging system (w/ chat) (Login/Password: monc)

-Movie Database Reqest movie@ibapcug.co.uk with "HELP" in body of message

offers: Info on actors, directors, movies, etc.

*MUSIC----------
-Billboard Charts finger buckaroo@rpi.edu
offers: U.S. Top Pop singles for the week.

-Guitar Chords/TAB ftp ftp.nevada.edu or ftp 131.216.1.11
offers: Tablature/Chords for guitar in /pub/guitar. Also at ftp.uu.net

-Lyric/Music Server ftp ftp.uwp.edu
offers: Lyrics, chords/tablature, and music pictures. (/pub/music/...)

-Music & Brain D-base telnet mila.ps.uci.edu or telnet 128.200.29.81
offers: Research on music related to behavior.(Login: mbi Password: nammbi)

-Music Newsletter mail listserv@vm.marist.edu (internet) or
mail listserv@marist (bitnet)
Body-of-letter: SUBSCRIBE UPMENS <your full name> offers: Reviews, intviews

-Sid's Music Server mail swilken@silver.ucs.indiana.edu
Subject: BOOTHELP offers: Lists of rare live recordings, cd's for sale.

-Used Music Server mail used-music-server@wang.com w/ subject: help
offers: Users can buy/sell/trade CDs/LPs/Tapes or subscribe to the list.

-Music List of Lists mail mlol-request@uriat.org (music list of lists)
---

*NEWS----------
-Electronic Journals gopher gopher.cic.net or gopher 192.131.22.5
telnet enews.com or telnet 192.215.1.51 (Login: gopher)
offers: Access to MANY electronic journals (Select Elec. Serials)

+Global News Navig. URL for http://nearnet.gnn.com/GNN-ORA.html
offers: O'Reilly's GNN, accessable with URL above via Mosaic or Lynx.

-List-Periodic Posts finger nicholes@tavanger.sgp.slb.com
offers: Listing of all FAQs, lists, and periodic postings to Usenet news.

-News Mail Servers mail [newsgroup]@ces.utexas.edu
offers: Post to Usenet news via email. (eg. [newsgroup] = alt-bbs)

-NNTP Server List finger lesikar@tigger.stcloud.msus.edu
offers: A list of publicly accessable NNTP news servers.

-NNTP Usenet News telnet kufacts.cc.ukans.edu or 129.237.1.30
Select: Reference Shelf (Login: kufacts) (See Also: UNC BBS, Panda Gopher)

-USA Today telnet freenet-in-[a,b,c].cwru.edu or 129.22.8.36
telnet yfa.ysu.edu or 192.55.234.27 (Login: visitor)
offers: USA Today Headline News, Sports, etc... (Also avail. via gopher)

-Nielsen TV Ratings finger norm@halcyon.halcyon.com
offers: Weekly TV ratings according to the Nielsen rating system.

-Oracle mail oracle@ecs.indiana.edu w/ subject: help
offers: The Usenet Oracle answers all your questions!

*POLITICS/GOVERNMENT----------
-Air Pollution BBS telnet ttnbbs.rtpnc.epa.gov or telnet 134.67.200.177
offers: Various BBS' that cover a wide range of Air Pollution information

-ACS mail info@acs.esusda.gov w/ "send help" in body of msg
offers: Americans Communicating Electronically. (Gov't docs via email)

-FedWorld Gateway telnet fedworld.doc.gov or telnet 192.239.92.201
offers: Access to lots of gov't databases, files, libraries, etc.

-Iowa Polit. Stk Mkt telnet iem.biz.uiowa.edu or 128.255.44.2
offers: Buy & sell shares in political candidates and other stuff.

-Library of Congress telnet locis.loc.gov or telnet 140.147.254.3
offers: Library of Congress Information System (LOCIS) Offers access to lib. of congress, legislative info, and copyright info.
telnet marvel.loc.gov or telnet 140.147.2.15
offers: LOC gopher, with access to lots of gov't docs. (Login: marvel)

-White House Releases mail Clinton-Info@Campaign92.Org with the subject: Help
offers: Subscribe to White House press releases (news, speeches, etc.)

-White House Summaries mail almanac@esusda.gov (in msg: subscribe wh-summary)
offers: Daily mailing of summary of White House press releases.

-Window on Gov't telnet window.texas.gov or telnet 192.198.66.186
offers: Government-related info, and lots of info on state of Texas.

-Project Gutenberg ftp mrcnext.cso.uiuc.edu or ftp 128.174.201.12
offers: Many books in print and almanac files. cd pub/etext

-Psychology Gopher gopher pandal.uottawa.ca 4010
offers: Psychology-related gopher.

-Public-Access Unix telnet pyx.cs.du.edu or 130.253.192.68
offers: Free account, with access to various UNIX features. (login: new)

-Public-Access Unix telnet hermes.merit.edu or telnet 35.1.48.150
telnet m-net.ann-arbor.mi.us or telnet 35.208.17.4
(Which host: um-m-net Enter 'g' for guest. login: newuser)

-Queer Resource Dir. ftp vector.intercon.com or ftp 149.52.1.130
offers: AIDS info/gay rights info. Recommend get file: README (cd pub/QRD)

-Recipe Archives ftp gatekeeper.dec.com (cd pub/recipes)
ftp mthvax.cs.miami.edu (cd pub/recipes)
ftp ftp.neosoft.com (cd pub/rec.food/recipes)
ftp cs.ubc.ca (cd pub/local/RECIPES)
offers: Anonymous ftp site for MANY food recipes.

*RELIGION/BIBLE RELATED----------

-Gabriel's Horn telnet 138.26.65.78 7777 (Also see Dartmouth above)
offers: Returns a Bible verse from the Old or New Testament

-JewishNet telnet vms.huji.ac.il or telnet 128.139.4.3
offers: WWW w/ info. on mailing lists, restaurants, etc. (Login: JEWISHNET)

-NY-Israel Gopher gopher israel.nysernet.org 71
offers: Jewish libraries, lists, projects, holocaust info, etc.

---

*SCIENCE/MATH/STATISTICS----------

-ASCinfo telnet asc.harvard.edu or telnet 128.103.41.101
offers: Info. relating to Advanced XRay Astrophy. Facility (Login: ascinfo)

-E-Math telnet e-math.ams.com or 130.44.1.100
offers:Am. Math. Soc. bbs w/ software and reviews. (Login/Password: e-math)

-Math Gopher gopher archives.math.utk.edu
offers Math archives (software, teaching materials, other gophers)

-NetLib mail netlib@ornl.gov or mail netlib@uunet.uu.net

offers:Math (usually Fortran) programs via email Body-of-letter: send index

-Nuclear Data Center telnet bnlnd2.dne.bnl.gov or telnet 130.199.112.132
offers: National nuclear data. (Login: nndc)

-Particle Information telnet muse.lbl.gov or telnet 131.243.48.11
offers: Lookup information on any particle! (Login: pdg_public)

-Periodic Table telnet camms2.caos.kun.nl 2034 or 131.174.87.239 2034
offers: electronic periodic table of elements.

-StatLib Server mail statlib@lib.stat.cmu.edu
Mail with line: send index. offers:Prgms, Datasets, etc. for statisticians.

-STIS telnet stis.nsf.gov or 128.150.195.40
offers: Science & Technology Information System. (Login: public)

-The Scientist ftp ds.internic.net (cd pub/the-scientist)
offers: Biweekly paper targeted at science professionals

-SERVICES telnet library.wustl.edu or telnet 128.252.173.4
offers: Access to nearly every listed service! (Login: hit return)

-SFI BBS telnet bbs.santafe.edu (login: bbs)
offers: Research BBS provides access to info. on Complex Systems.

*SOFTWARE/Information SERVERS----------

-Info/Software Server telnet rusinfo.rus.uni-stuttgart.de or 129.69.1.12
offers: journals, unix stuff, recipes, online cookbook, etc. login: info

-Software Server(ASK) telnet: askhp.ask.uni-karlsruhe.de or 129.13.200.33
offers: On-line software search. (Login/password: ask)

-ZIB Electronic Libr. telnet elib.zib-berlin.de or telnet 130.73.108.11
offers: Library of software, links to other libraries. (Login: elib)

---

*SPACE/ASTRONOMY----------

-EnviroNet telnet envnet.gsfc.nasa.gov or telnet 128.183.104.16
offers: Space environment resource. (Login: envnet Password: henniker)

-Europe Space Agency telnet esrin.esa.it or telnet 192.106.252.3
offers: Access ESA PID (Prototype Info Dir) & ESIS (Eur. Space Info System)

-FIPS telnet pldsg3.gsfc.nasa.gov or telnet 128.183.36.16
offers: Science, etc. databases from satellites, etc. (Login: FIPSUSER)

-Lunar/Planet Instit. telnet lpi.jsc.nasa.gov or telnet 192.101.147.11
offers: Resources on Geology, Geophys, Astron., Astrophys. (Login: lpi)

-NASA Headline News finger nasanews@space.mit.edu
offers: Recent press releases from NASA. (See also SpaceNews)

-NASA SpaceLink telnet spacelink.msfc.nasa.gov or telnet 192.149.89.61
offers: Latest NASA news, including shuttle launches and satellite updates.

-NASDA telnet nsaeoc.eoc.nasda.go.jp or telnet 133.56.72.1
offers: National Space Development Agency of Japan (Login: nasdadir)

-NED telnet ned.ipac.caltech.edu or telnet 134.4.10.118
offers: NASA Extragalactic Database. Bibliographies, info. (Login: ned)

-NODIS telnet nasdc.gsfc.nasa.gov or telnet 128.183.36.25
telnet nasdca.gsfc.nasa.gov or telnet 128.183.36.23
offers:Menu-driven access to Nat'l Space Science Data Center (Login: nodis)

```
-SDDAS                  telnet espsun.space.swri.edu 540 or 129.162.150.99 540
  offers: SW Research Data Display & Analysis Center.

-SpaceMet               telnet spacemet.phast.umass.edu or 128.119.50.48
  offers: Science/space bbs about space exploration w/ info from NASA.

-SpaceNews              finger magliaco@pilot.njin.net
  offers: Weekly publication of space news. (See also Nasa Headline News)

-STInfo                 telnet stinfo.hq.eso.org or tenet 134.171.8.4
  offers: Reports about Hubble Telescope, press releases (Login: stinfo)
 ---------------------------------------------------------------------------

*SPORTS-----------------------------------------------------------------------
 -Sports Schedules NBA:telnet culine.colorado.edu 859 / 128.138.129.83 859
                  NHL: telnet culine.colorado.edu 860 / 128.138.129.83 860
                  MLB: telnet culine.colorado.edu 862 / 128.138.129.83 862
                  NFL: telnet culine.colorado.edu 863 / 128.138.129.83 863
                       finger copi@oddjob.uchicago.edu for sports schedules
   offers: Sports schedules on-line.  help for help, return for today's games.

 -NFL Scores/Standings finger nfl@spam.wicat.com or nfl@192.150.148.62
                       finger nfline@spam.wicat.com (NFL Line Spreads)
   offers: Football scores, standings, and next weeks schedule.
 ---------------------------------------------------------------------------

*TRAVEL-----------------------------------------------------------------------
 -Subway Navigator       telnet metro.jussieu.fr 10000 or 134.157.8.132 10000
   offers: Search subway routes of major cities, in French or English.

 -Travel Info. Library  ftp ftp.cc.umanitoba.ca or ftp 130.179.16.24
   offers: Travelogues, guides, FAQs.  cd to the directory "rec-travel"
 ---------------------------------------------------------------------------

-UNC BBS                telnet launchpad.unc.edu or telnet 152.2.22.80
  offers: Usenet News, Lib. of Congress, nationwide libs.  (Login: launch)

*USER LOOKUP SERVICES/WHOIS SERVICES------------------------------------------
 -Mail Srvr/Usr Lookup mail mail-server@rtfm.mit.edu
   in body of mail message: send usenet-addresses/[name searching for]

 -Netfind User Lookup  telnet bruno.cs.colorado.edu or telnet 128.138.243.151
                       telnet cobber.cord.edu or telnet 138.129.1.32
                       telnet pascal.sjsu.edu or telnet 130.65.86.15
                       telnet mudhoney.micro.umn.edu or telnet 134.84.132.7
                       telnet redmont.cis.uab.edu or telnet 138.26.64.4
                       telnet athe.wustl.edu or telnet 128.252.122.173
                       telnet ds.internic.net or telnet 198.49.45.10
                       telnet netfind.oc.com or telnet 192.82.215.88
                       telnet archie.au or telnet 139.130.4.6
                       telnet netfind.anu.edu.au or telnet 150.203.2.14
                       telnet netfind.if.usp.br or telnet 143.107.249.132
                       telnet macs.ee.mcgill.ca or 132.206.61.15
                       telnet malloco.ing.puc.cl or telnet 146.155.1.43
                       telnet netfind.vslib.cz or telnet 147.230.16.1
                       telnet nic.nm.kr or telnet 143.248.1.100
                       telnet lincoln.technet.sg or telnet 192.169.33.6
                       telnet nic.uakom.sk or telnet 192.108.131.12
                       telnet monolith.cc.ic.ac.uk or telnet 155.198.5.3
                       telnet lust.mrrl.lut.ac.uk or telnet 158.125.2.0.7
                       telnet dino.conicit.ve or telnet 150.188.1.10
   offers: Given a name and org./school, finds a user for you (login: netfind)

 -Whois Services       telnet rs.internic.net or telnet 198.41.0.5
                       mail service@rs.internic.net  (w/ subject: help  OR
```



```
                        send RFC-xxxx.TXT, with xxxx being the RFC number)
                       telnet info.cnri.reston.va.us 185  (Knowbot Info Serv.)
                       telnet garam.kreonet.re.kr or 134.75.30.11 (Login: nic)
                       telnet paradise.ulcc.ac.uk or 128.86.8.56  (Login: dua)
                       ftp sipb.mit.edu (pub/whois/whois-servers.list)
  offers: Way to find internet address given a keyword. To access type: whois
 ---------------------------------------------------------------------------

 -UUCP map entries by mail:   mail dns@grasp.insa-lyon.fr (body: help)
  usage: in body-of-letter: uucp uucp_site  Mails you UUCP map entry

 -MAIStation           telnet quake.think.com or telnet 192.31.181.1
                       telnet wais.com or telnet 192.216.46.98
                       telnet swais.cwis.uci.edu or 128.200.15.2
                       telnet sunsite.unc.edu or telnet 152.2.22.81
                       telnet info.funet.fi or 128.214.6.100  (Login: info)
                       telnet wais.nis.garr.it or 192.12.192.10 (Login: wais)
  offers: Wide Area Info. Service. (Login: swais)

*WEATHER/ATMOSPHERIC/OCEANIC--------------------------------------------------
 -Auroral/Solar Report finger aurora@xi.uleth.ca or finger aurora@142.66.3.29
                       finger solar@xi.uleth.ca or finger solar@142.66.3.29
                       finger daily@xi.uleth.ca or finger daily@142.66.3.29
  offers: Auroral activity warnings/watches/sightings, updated hourly.
          Solar = 3-Hourly solar & Geophysical report, daily is the daily one

 +Avalanche Forecast   mail snowfall@dcs.glasgow.ac.uk  with a blank message

 -Emergency Info.      telnet oesl.oes.ca.gov 5501 or 134.186.127.1 5501
  offers: State of Cali. - Governor's Office of Emergency Services
                       gopher vita.org
  offers: Disaster Information Center with disaster reports and data.

 -Flood Gopher/Info    telnet idea.ag.uiuc.edu or telnet 128.174.123.126
                       telnet exnet.iastate.edu or telnet 129.186.20.200
  offers: Tons of files for coping with floods and hurricanes (Login: flood)

 -NOAA                 telnet esdim1.nodc.noaa.gov or telnet 140.90.235.168
  offers: Nat'l Oceanic and Atmos. Admin.  Lots of data!  (Login: noaadir)

 -Oceanic Info. Center telnet delocn.udel.edu or telnet 128.175.24.1
  (Login: info)

 -Tropicl Strm Forecst finger forecast@typhoon.atmos.colostate.edu
  offers: Seasonal forecast for Atl. Ocn. Also: finger forecast@129.82.107.24

 -Weather Account      telnet aeolus.rap.ucar.edu or telnet 128.117.192.73
  offers: (Login: weather Password: orknot  type: weather or man weather)

 -Weather Services     telnet downwind.sprl.umich.edu 3000 or 141.212.196.177
                       telnet wind.atmos.uah.edu 3000 or 146.229.8.2 3000
                       telnet nevado.SRCC.lsu.edu      (Login: srcc)
                       gopher wx.atmos.uiuc.edu or gopher 128.174.80.10
  offers: City/State forecasts, ski conditions, earthquake reports, etc.
                       telnet vicbeta.vic.bom.gov.au 55555 or 134.178.130.2
  offers: Weather service for Australia.
 ---------------------------------------------------------------------------

 -Dictionary Servers   telnet cs.indiana.edu 2627 or 129.79.254.191 2627
                       telnet chem.ucsd.edu or 132.239.60.1 (login: webster)
                       telnet/gopher wombat.doc.ic.ac uk (login: guest)
  offers: Dictionary/Spelling service.  Type "HELP" for info.  (ALL CAPS!)

 -World-Wide Web       telnet www.njit.edu or telnet 128.235.163.2  (USA (NJ))
                       telnet ukanaix.cc.ukans.edu or 129.237.1.30   (USA(KA))
                       telnet www.twi.tudelft.nl   (Login: lynx) (NETHERLANDS)
```

telnet millbrook.lib.rmit.edu.au (Login: lynx) (AUSSIE)
telnet info.cern.ch or telnet 128.141.201.74 (SWISS)
telnet vms.huji.ac.il or telnet 128.139.4.3 (ISRAEL)
telnet sun.uakom.sk or telnet 192.108.131.11 (SLOVAKIA)
offers: Access to various documents, lists, and services. (Login: www)

* NOTE: NO LOGIN NAMES OR PASSWORDS ARE REQUIRED UNLESS STATED OTHERWISE! *
NOTE: FOR FTP SITES, LOGIN AS anonymous, Password is your email address.
* Copyright 1994 Scott Yanoff. No CHANGES are to be made to this document without the author's written consent. Reproduction/distribution without my permission IS ALLOWABLE so long as it is for non-profit purposes.